IMPROVING CURRICULUM IMPLEMENTATION AND COVERAGE: MANAGERS AND EDUCATORS' EXPERIENCES OF THE JIKA IMFUNDO PROGRAMME IN SELECTED SCHOOLS IN THE KING CETSHWAYO DISTRICT

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DECLARATION

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I declare that the above thesis is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the thesis to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or at any other higher education institution.

28/01/2020

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(Grace Moodley)

DEDICATION

To dearly departed family members who have added value and impacted my life in a positive way:

- To my DAD, a great provider and a family man, an epitome of humility and kindness who instilled in me the value of education.
- My dearest brother Mathew, my first friend and sparring partner.
- My loving and caring grandmother, aunt and uncles.

Gone but not forgotten. Love and miss you all lots. Until we meet again.

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- My loving husband, Marlin, my dear children and adorable grandchild.
- My dearest mum.
- My precious, awesome sisters and their families.

Strive for excellence in all that you do and aspire to be the best version of yourself.

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"There is not a more pleasing exercise of the mind than gratitude.
It is accompanied with such an inward satisfaction that the duty is
sufficiently rewarded by the performance." ~ Joseph Addison

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ABSTRACT

South African learners' poor performance in general, and in the national matriculation examinations, has necessitated the introduction of various curriculum implementation improvement programmes in the country. The Jika iMfundo Programme (JiP) is a campaign of the Programme to Improve Learning Outcomes (PILO) that was piloted, on scale, in two districts of KwaZulu-Natal (KZN), South Africa, in 2014, to improve the learning outcomes in the province by supporting educators and school managers to improve curriculum coverage and implementation. This study employs a constructivist worldview to explore the experiences of educators and school managers in the King Cetshwayo District of KZN with the implementation of the JiP. The study addresses the issues of the preparation of stakeholders for curriculum change, the challenges experienced in implementing the programme and the adequacy of resources and support that are required to implement the JiP.

A qualitative approach, and a multi-case study design involving nine educators, three department heads and three principals, to investigate the key research questions within three primary schools in the King Cetshwayo District were adopted. The educators were all teachers of mathematics from grades 1-7 and were purposively selected as respondents. Data were elicited through semi-structured, one-on-one interviews, document analysis and observations. Since the data represented the perspective of individuals, data analysis was descriptive and interpretive in nature and was reported under pre-set and emergent themes.

The main finding from the study is that, although the majority of educators and managers have a positive attitude towards the programme and are utilising the knowledge and skills attained through the training, the resources and support provided to implement the programme, the following factors inhibit efficacious implementation: lack of consultation, inadequate training, lack of sufficient learner resources, inadequate support from schools and the district and the fast pace and organisation of the mathematics curriculum.

School contextual factors also affect the implementation of revised curriculum. Other factors like inadequate or non-reflection by educators on their curriculum coverage and insufficient opportunities for conversation around curriculum coverage at schools were also identified by the researcher as areas needing attention. Consultation with educators on future educational changes, more frequent training sessions, the provision of adequate learner resources, reduction in class

sizes, a review of the mathematics curriculum for the Foundation Phase are some of the recommendations made in the study.

KEY TERMS:

Curriculum Assessment Policy Statement (CAPS); curriculum change; curriculum change management; implementation of change, curriculum coverage; curriculum management; curriculum tracking; Jika iMfundo Programme.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANA	-	Annual National Assessment
C2005	-	Curriculum 2005
CAPS	-	Curriculum and Assessment Policy Statements
CM	-	Circuit Manager
CPTD	-	Continuous Professional Teacher Development
DBE	-	Department of Basic Education
DOI	-	Diffusion of Innovation
FP	-	Foundation Phase
HoD	-	Head of Department
InterSen	-	Intermediate and Senior Phase
IQMS	-	Integrated Quality Management Systems
JiP	-	Jika iMfundo Programme
JiT	-	Just in Time
KZN DoE	-	KwaZulu-Natal Department of Education
NECT	-	National Education Collaboration Trust
OBE	-	Outcomes Based Education
OTL	-	Opportunities to Learn
PILO	-	Programme to Improve Learning Outcomes
RNCS	-	Revised National Curriculum Statements
SASAMS	-	South African Schools Administration and Management System
SMT	-	School Management Team
TIMSS		Trends in International Mathematics and Science Study

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND

Almost 20 years since the first major education transformation in South Africa, Spaull (2013), in his report entitled "South African Education Crisis", concludes that education has not improved much with regards to learner performance in literacy and numeracy. South African learners score the lowest in international comparative education assessments, which measure the quality of education (Jansen, 2003:106). Results from approximately six million primary school children in the Annual National Assessments (ANA), assessments in mathematics and English for grades 3, 7 and 9, in February 2011, revealed that Grade 3 learners scored an average of 35% for literacy and 28% for numeracy, while Grade 6 learners obtained 28% for languages and 30% for mathematics (Zenex Foundation, 2013).

This information was later confirmed in a study conducted by Van der Berg (2015: 38), in which the analysis of ANA data corroborated the findings of other international and national assessments: that learners in South African schools perform poorly in terms of "cognitive outcomes". However, in 2015, the ANA was postponed by the teacher trade unions, who insisted on an improvement in the "design and implementation of ANA in order to increase their usefulness" (Taylor, 2015: 3).

South Africa also performed poorly in the Trends in International Mathematics and Science Study (TIMSS) in 2015, where SA was placed 38th for mathematics and 39th for science out of the 39 countries that participated in the Grade 8 assessment. Furthermore, South Africa's mathematics and science education was placed last out of the 140 countries that were assessed according to the World Economic Forum's Global Competitiveness Report for 2015–2016 (Wilkinson, 2015).

South African learners perform below par in mathematics in comparison to learners in other countries, such as Singapore, Hong Kong, Korea, Chinese Taipei, Japan, Australia and England (DBE, 2016a). More specifically, in KwaZulu-Natal (KZN), the 2014 Education Statistics (DBE, 2016a) placed KZN 7th out of nine provinces in the NSC results, with a 69.7% pass rate, just ahead of Eastern Cape. The overall pass rate for the country was 75.8%.

While Grades 1 -3 performed well in the 2014 ANA, achieving more than 70%, scoring 50% and more, Grades 4-6 performance in mathematics was very poor. The pass rate in English Home

Language was between 66% and 71%, while only 31-36.5% of learners achieved 50% and over in mathematics.

Researchers (Fiske & Ladd, 2006; Mouton, Louw & Strydom, 2012; Msila, 2008) attribute the compromised state of South African education to the implementation of Curriculum 2005 (C2005) and Outcomes Based Education (OBE), which were introduced by the democratic government to enforce desegregation and equal access in education after the end apartheid. The OBE theory, as part of C2005, was initially considered an important component of the process of democratising education with a focus on outcomes, learner-centeredness and a competence-based curriculum with a combination of knowledge, skills, attitudes and values (Jansen, 2003; De Waal, 2004). The failure of OBE led other curriculum changes namely, the Revised National Curriculum Statement (RNCS) and the Curriculum and Assessment Policy Statement (CAPS) in quick succession.

Allais *et al.* (2009:164) suggest that the South African government has created various new government initiatives to address the inequality and weakness in some areas of the education system and also the poor performance of learners in comparison to learners from poorer African countries. The KZN DoE has over the years devised plans such as the KZN DoE's Five -Year Strategic and Performance Plan and the KZN Curriculum Delivery Strategy (KZN DoE, 2005a) to improve education in the province, through capacity building in proper implementation and delivery of the curriculum. In the Five Year Strategic and Performance Plan, educators are identified as a critical resource and the curriculum as a crucial tool for achieving quality education in the province (KZN DoE, 2005b: 4). The former Minister of education and Culture (MEC) Ina Cronje states in the plan that the focus of the KZN DoE is on fast tracking processes in improving educator capacity in curriculum delivery. In December 2012, Mr Senzo Mchunu, in his former capacity as MEC for Education, signed a Memorandum of Understanding where the intentions to establish the KZN Initiative to Improve Learning Outcome (KZNILO) were confirmed. It is on this basis, and against this backdrop, that the Jika iMfundo Programme (abbreviated to JiP for the purposes of this study) was piloted in the Pinetown and King Cetshwayo (uThungulu) districts in KZN in 2014 with the intention of replicating the programme in all districts in the province after efficacious monitoring.

Jika iMfundo, which means "to turn education around" in isiZulu (one of 11 official languages in SA which is spoken by the majority of citizens in KZN) (Pillay, 2018), is a collaborative effort between KZN DoE, and its partners, the National Education Collaboration Trust (NECT) and the provincial initiative to improve learning outcomes (PILO), with the slogan, "What I do matters",

(Christie, 2018: 3). As reported by the *Sunday Tribune*, the former MEC for Education in KwaZulu-Natal, Peggy Nkonyeni, speaking at the launch of the programme, said:

> *Jika iMfundo's launch really speaks to the power of a collaborative process to address the challenges in our education system. We are accountable for the result of our learners and failure is not an option as we work towards a better future for our children.* (in Joyce, 2014: 1)

This speaks to the commitment of the policy developers in collaboration with schools to ensure that the programme achieves its intended goals. Mary Metcalfe, the Education Change Director at PILO, explained that the JiP is going to work more proficiently and intelligently with the appropriate tools and provide support to all stakeholders - district officials, teachers, school management, learners and parents - to improve learning (Meyer, 2014: 1).

The JiP is promulgated as a "radical education transformation initiative and teacher development strategy focusing on developing strong curriculum management skills" (Mahlambi, 2014:1). The radical nature of the programme is illustrated by the features of the programme as which are summarised from the comments of Metcalfe (in Meyer, 2014: 1) the initiative is unlike previous ones as it "works within the system and supports the government to lead the change, rather than the change being led from outside" ; it is a district wide initiative that does not focus on a limited number of schools; it focuses on altering how educators, principals and district officials relate to each other and advancing new ways of assisting each other and corroborating to cover the curriculum effectively ; matric results and annual assessments would be used to weigh the success of the intervention; the main focus of the JiP is on the improvement of English, isiZulu, mathematics and science which will be monitored regularly to ensure the effectiveness of the programme; it recognises that the provision of support, in curriculum coverage, to teachers, principals and the district, is important, to improve teaching and learning; subject heads will be supported and they in turn will support the educators; districts will have an opportunity to improve their relations with the schools by focussing less on issues of compliance. Thus, the KZN DoE through the programme seeks to empower educators and managers by developing their skills in tracking and managing curriculum coverage. Furthermore, the intervention purposes to allow districts to support schools needing assistance and school management teams (SMT) to manage teaching and learning (Mlambo, 2014: 1).

In essence the intention of the JiP is to provide support to stakeholders in improving curriculum coverage at schools by building their capacity in content coverage and in curriculum management

and by providing them with resources to accomplish this (Mabaso, 2016; Mlambo, 2014; Metcalfe, 2017). Curriculum coverage essentially means that educators have to cover the CAPS curriculum in the subject for the year, otherwise learners will have gaps in their knowledge and fall behind in the following year (KZN DoE, 2016: 1). JiT (Just in Time) training for educators and SMT training on management and leadership skills provide opportunities for educator development. Educators receive content knowledge and a 'tracker', the Heads of departments (HoDs) receive the skills and tools to monitor curriculum coverage, and senior managers (principals and deputy principals) are equipped through leadership and management workshops by PILO to manage the curriculum (Joyce, 2014; Metcalfe, 2017). The use of textbooks and workbooks are considered important aspects of curriculum coverage (Ristevska, Kochoska, Gramatkovski & Sivakova, 2015). With the provision of mathematics workbooks to Foundation Phase learners and the recommendation of a few CAPS aligned textbooks, the task of the teacher is simplified by the programme. The teacher guide, consisting of content, teaching methods, activities, timeframes and resources, supports educator curriculum delivery and curriculum coverage (Mabaso, 2016; Mlambo, 2014; Metcalfe, 2017).

Many curriculum innovations, according to KZN Department of Education (2015), fail due to the impatience of education reformers to achieve improvements as quickly as possible, and not take into account the complexity of schools and communities. Improvement in the education system, the KZN DoE argues, requires a change in human behaviour, as well as technical, policy or structural changes (Ibid.: 2). Since change implies new ways of doing things, the key focus of this study is on understanding the experiences of the educators and managers' in the implementation of the changes necessitated by the programme. People's responses to change may vary. Change may be rejected or accepted (Dunican, 2015). Some people may adopt a change but not sustain it. The changes recommended by the programme are around curriculum coverage. Educators need to change the way they deliver and track their coverage of the curriculum and managers need to supervise and offer support in order to ensure the success of the programme (Metcalfe, 2017).

This study provides details, methods, conclusions and recommendations, drawn from a multi-case study conducted at three primary schools within the King Cetshwayo district into the experiences of managers and educators in the implementation of the JiP. This chapter provides an introduction, overview of the methods and design employed, identifies the key research questions provides the rationale and significance of the study and demarcates the research problem that motivated the study. The context of curriculum improvement in South Africa is also presented to and background to the study.

1.2 CURRICULUM IMPROVEMENT IN THE SOUTH AFRICAN CONTEXT

Since the study is based on the implementation of a programme to support educators and managers in improving the implementation of the revised curriculum, as well as the learning outcomes through the management of curriculum coverage, it is relevant to begin this section with insights into the curriculum change in the South African education context. This will place into perspective the changes in education that have led up to and necessitated the introduction of the JiP in two districts in the province of KZN.

Over the past two decades, since 1994, South African education has been characterised by a myriad of curriculum changes, in quick succession, in an attempt to reform education and to redress the inequalities of apartheid. There have been four national curriculum changes in 23 years. In 1996, Curriculum 2005 (C2005) was introduced, and this was followed by the Revised National Curriculum Statement (RNCS) in 2002. The Curriculum Assessment Policy Statement (CAPS) was mandated in 2012 and this was followed by Schooling 2025 in 2014.

Before 1994 and during the apartheid era, education policies and practice- were based on racial lines and aiming to keep the black majority in a state of political subservience through an inferior quality education. Segregated education, according to Kallaway (1984: 92), disadvantaged all people of colour, but was particularly devastating for black people. Political change in 1994 led to a change in the educational system. The 19 departments of education, which were divided along racial lines, were merged under one national department of education by the new democratic ANC government upon its ascendency to power. The C2005, with its outcomes-based ideology and philosophy, was introduced in 1996, in a transformational effort, and fully implemented in 2005. The focus of this post–apartheid education practice was on bringing about desegregation in education, extending access to the previously disadvantaged and also improving results in mathematics and History (Weber, 2008: x). Weber says that "aspects such as critical reasoning, self-reliant learning, cooperative approaches, community responsiveness, environmental awareness, self-confident assumption of responsibility, political consciousness, engaged citizenship, were marginalized" (Weber, 2008: x).

According to Tarvuvinga and Cross (cited by Maluleka, 2015: 2), C2005, was a "dramatic departure" from the teacher-centred and subject dominated apartheid curriculum to an active learner and teacher as facilitator pedagogy. They further refer to C2005 as a "compromise curriculum" which incorporated and reflected theories of constructivism, progressivism and

traditional essentialism. Although C2005 was considered a learner-centred approach, which undertook to provide learners with high quality education, which avoided rote learning and developed critical thinking, it did not accomplish all that it promised, due to certain "structural design flaws and content deficiencies" (Jansen & Taylor, 2003: 3). Educators experienced problems implementing C2005 because of the complexity of its terminology; they were not adequately prepared to implement the curriculum; they lacked the necessary knowledge and skills to draw up learning programmes, especially since it underspecified content and placed more emphasis on integration. There were also complaints about discrepancies in the contexts and resources of schools. While there were some privileged schools with adequate resources and teachers who were able to implement the curriculum, the masses of underprivileged schools were under-resourced and struggled to do so (Jansen & Taylor, 2003).

C2005 was reviewed upon request by the Minister of Education at that time, Kader Asmal, due to the flaws in its design and content. The following areas were cited as areas of C2005 that needed attention by the review committee: The confusing C2005 terminology; the overloaded curriculum with not enough time allocated for the improvement of reading skills, basic mathematics and science concepts; a weak design with regards to sequence, pace and progression; and inadequate training of educators (PMG, 2000: 1). Following the review, a streamlined version of C2005, the Revised National Curriculum Statement (RNCS) was implemented in 2002. The RNCS was still underpinned by the OBE philosophy but its language was simplified so that educators could understand it better and its design features were reduced. Although the RNCS sought to create critical thinking, confident, independent, lifelong learners and responsible citizens, it too was beset with implementation problems as a result of inadequate educator training in OBE methodology and failure to take the contextual factors of individual schools into account. The results of a study conducted by Poutiainen (2009) indicated that the educational reform process had failed to account for the process of implementation or the part played by educators in the creation and implementation of the reforms. Furthermore, the contextual factors at various schools in SA were not acknowledged. After a review, the RNCS was, reinforced in order to improve the quality of teaching and learning, in South African schools (DBE, 2010).

The Curriculum Assessment Policy Statements (CAPS) was implemented in 2011, which saw the focus of the national curriculum shift from learning outcomes to content coverage and the assessments tasks that are required each term per subject. These changes ensured that educators and learners had clarity on exactly what topics had to be covered each term, in each subject (DBE, 2010). CAPS was made more accessible to educators by providing them with more details, such

as topics to be covered and the number and type of assessments per term. CAPS represented a return to a "traditional understanding of subjects and to content- driven learning" (Du Plessis, 2013). The role of the learners reverted from a "learner in the learning process, from participant in negotiating meaning to a recipient of pre-ordained knowledge" and the role of the educator as a curriculum developer was reduced, narrowing the focus to a more clearly disciplined, specific approach. The focus on group work shifted to individual work; assessment was simplified; focus on controlled tests and exams, instead of continuous assessment, and included clarity of terminology, contents and skills (Grussendorff, 2014: 45).

In general, the policy changes were necessary steps taken by the DBE in improving the quality of education for the disadvantaged majority of South Africans. Each change implied that educators and managers at schools faced implementation issues, such as teaching, assessment, learning, resources and continuous teacher development, all of which placed immense pressure and stress on them.

Besides curriculum changes, there have been several targeted interventions at improving capacity in South African schools in education policy from 1994-2012 (ZENEX Foundation, 2013):

The QIDS Up programme started in 2006 and aimed to provide educator and district development support to 5,000 low performing primary schools. The programme addressed a key area of neglect in the education system of inadequate resource allocation to schools in poor and disadvantaged communities, in order to provide quality education (DoE, 2006: 1). QIDS Up also includes initiatives to improve science, mathematics and Technology teaching (Cembi, 2006: 1).

At a primary school level, the Foundations for Learning Campaign (FFLC), implemented in 2008 was aimed at improving the quality of reading, writing and numeracy at all grade levels. The need for change according to Hlomuka (2014:18) was based on disturbing empirical data regarding the poor performance of 49 primary school learners in literacy and numeracy. FFLC was a four-year campaign, with a goal that, by 2011, all learners would be able to demonstrate age-appropriate levels of literacy and numeracy of not less than 50% in all South African schools. The four-year campaign expected to see a 15% and 20% improvement in learner performance in these subjects. Literacy and numeracy levels in grades 3 and 6 were assessed at the end of the programme to determine the overall impact of the campaign (Meier, 2011: 550). Studies revealed that a lack of knowledge of the programme, lack of pedagogical knowledge and lack of support and communication plagued the implementation of FFLC (Hlomuka, 2014; Govender, 2013).

A targeted intervention approach was implemented to deal specifically with mathematics and science outputs at secondary school level. The Dinaledi Schools Project was launched in 2001 to increase the performance of historically disadvantaged learners in Senior Certificate mathematics and physical science in a selected number of schools. According to Buthelezi (2012: 1), a "major stumbling block" to the enrolment of high school learners in mathematics and science is their perception that these subjects are difficult and this would lead to their failure. A teaching skills shortage is another reason for learners' poor performance in mathematics and science. The focus of the programme is to motivate learners to take mathematics and science as subjects by holding motivational sessions. Prospective educators are awarded bursaries to study mathematics and science. Teachers are also given support to improve their skills in teaching difficult concepts.

The aim of the Advanced Certificate in Education (ACE) programme, piloted in 2007-2009, "was to make an appreciable difference in participants' management practice, leading to school improvement. The ACE was also intended to ensure that candidates were able to engage with leadership and management issues in a sustained way" (Bush, Kiggundu & Moorosi, 2011: 1).

To ensure and improve schools' accountability with regards to the achievement of learning outcomes, principals are required to make annual submissions to the provincial Head of Department as per the Education Laws Amendment Act 31 of 2007 on academic performance, plans to improve performance and use of resources (South African Government Gazette, 2007: 11).

The need for transformation, and thereafter to improve the quality of education, motivated the curriculum changes and interventions in the SA education system, which were seriously compromised by Outcomes-based Education and the apartheid system. The basic dimensions of quality education, according to Thankachan (2015: 125), include healthy learners, with supportive families and communities and healthy, safe environments with adequate resources. There is also the need for a relevant curriculum and quality teaching by trained teachers who use learner-centred approaches to improve the skills, attitudes and values in learners. In order to achieve quality education, the education department needs to strike a balance between their envisioned ideals and the realities in schools. There is also a need for good teaching by good teachers in conducive learning environments (Ng, 2015: 307). This implies improving the quality of educators, developing school infrastructures, and equipping schools with adequate resources to enable improved teaching and learning processes. Furthermore, Elmore (2008: 1) draws attention to the dynamic relationship between the three components of the instructional core: the learner, the

teacher and the curriculum. This author maintains that learner performance can be improved by raising the coverage and level of the content that is being taught to the learner; increasing the knowledge and skill of the teacher in the subject and increasing the learner's level of engagement and active learning in the classroom. Planting (2014: 1) criticises the government's use of the approach "if you don't know what to do, develop a new policy" to resolving the crisis in education. The author argues that the reforms implemented by the government did not address the real issues at the core of the problem. Apartheid may have been dismantled in 1994, but its legacy still lives on in the quality of education in South Africa and the socio-economic status of its people. Unequal provision of funding, resources, infrastructure and quality of education to the different race groups has led to an unequal society. Black educators taught in schools where learners received inferior quality education, without, amongst others, a focus on mathematics and science, and the educators themselves received inferior teacher training compared to their white counterparts. Ironically, these are the same individuals who have now been tasked and are expected to improve the quality of education in SA. Therefore, retraining of educators in subject content knowledge on a regular basis is imperative. The improvement of educational institutions, provision of resources and reduction of class sizes are also issues which need to be addressed for a degree of improvement to be realised in the future. The following key obstacles to the provision of quality education in South African schools have been identified by Khoza (2013: 10):

- School Level: Most schools are dysfunctional as they are unable to use the resources of time, teaching, financial and physical resources into learning outcomes.
- Classroom Level: The curriculum delivery is inadequate as teachers are unable to complete the curriculum and teach at a lower level than what is required by the curriculum.
- Teacher Level: Teachers' knowledge of the content is inadequate. They lack professionalism and work ethics.
- District Level: The District are unable to support and monitor of schools which is their core duty as a result of inadequate expertise and staffing issues.
- Household Level: Schools are not supported by communities while the involvement of parents in their children's learning in mostly non-existent.

It is against this backdrop that the effects of the improvements that are envisioned by the JiP, in the area of educator's capacity building, curriculum coverage, curriculum implementation and curriculum management will be examined from the perspectives of educators and managers. It

must be borne in mind that the JiP is not a new curriculum but it is a programme to assist educators in the implementation of the CAPS curriculum. All improvements in education have mostly focused on undoing the damage of the apartheid education and thereafter C2005. The CAPS curriculum will only succeed if it is implemented properly, but educators have been struggling in this regard because of its content overload. The JiP seeks to break down the content in manageable timeframes to help coverage by educators and learners. The study is important as it will explore questions around SMT and teachers' experiences of the JiP.

1.3 RATIONALE

This study was motivated by the researcher's experience as an educator and manager of a primary school with the implementation of previous curriculum change efforts such as the C2005, OBE, RNCS, and the Foundations for Learning Campaign. These past efforts have been revised or abandoned due to ineffective implementation, lack of resources, inadequate training of educators and lack of support to schools. Since its launch in 2014, the JiP has been implemented from grades 1 to 7 at the school where the researcher works. Although educators and managers initially experienced mixed emotions about 'Jika', as it is referred to at the school, they have implemented the programme and are using it to plan, track and monitor curriculum coverage. The main reason for the researcher choosing this study, is to ascertain how managers and educators have experienced the implementation of this new programme, since they are key to the improvement of curriculum coverage at the local level. Furthermore, as a manager, the researcher has always been concerned with issues of educators' time on task and the time lost through educator and learner absenteeism and how other school activities infringe on curriculum coverage, so a programme that provides support to stakeholders at schools to improve curriculum coverage was of interest. The researcher is of the opinion that the more time learners spend engaged with the content in a collaborative manner, the better the results of assessments and tests would be. In order to ensure that the curriculum is being adequately covered, managers need to supervise the delivery and coverage of the curriculum by educators.

This study was also undertaken to expand on the current information on the JiP since it is a new programme. At the beginning of this study it was only being piloted at two districts in KZN province. Although there is a plethora of research on the implementation of curriculum and education innovations in educational institutions, with the objective of understanding and dealing with the process of change, few have focused on the implementation of the JiP as a programme to

improve the capacity of educators and managers in curriculum coverage. Fewer still have focused on the experiences of educators and managers. A library and google scholar search only provided approximately forty finds on the topic of the Jika iMfundo Programme. Of these, less than ten dealt with the experiences of educators and managers. Most of the studies are on instructional leadership, roles of the HoDs, and on the management of curriculum coverage. The researcher therefore considered it pertinent to elicit the opinions of educators and managers on their experiences with the JiP, especially with the aspects of professional development and support in implementing the changes implied by the programme.

From their reflections, the study will establish how the programme is being implemented at schools and what support is provided to educators and managers to improve curriculum coverage. Positive aspects and challenges with the programme may be identified, which could inform future planning. The study will also establish the best practices in the successful implementation and use of the programme, which could be of assistance to other primary schools.

Information from this study can also be beneficial to developers of the JiP for the purposes of future planning of resources, developmental activities and in the provision of support, especially since the programme will be implemented to the entire province by 2022.

1.4 PROBLEM STATEMENT

The latest programme of the KZN province to achieve improvements in the quality of education is the Jika iMfundo Programme (Metcalfe, 2017; Pillay, 2018; Sayo, 2016). The JiP has been piloted in 670 schools in two districts of the province of KZN to support schools improve curriculum coverage (Sayo, 2016). As with any new programme, the introduction of the JiP implies a change in the status quo. New and improved ways of tracking and supervising curriculum coverage are recommended to improve learning outcomes at schools (Metcalfe, 2017; Pillay, 2018; Sayo, 2016). This means that those involved in the implementation will need information, training, resources and ongoing support to implement the programme successfully. In schools, educators are the key role players in the implementation of change in their classroom practice while managers need to manage the change process. It is therefore of paramount importance to efficacious implementation of change, that their experiences are highlighted and understood. Their experiences with the implementation of the new or revised practices are also crucial to gaining an

in-depth knowledge of the JiP. The JiP has a number of features that the programme developers envisage will lead to improved outcomes at schools if implemented effectively.

The problem is that no one will know to what extent these are being implemented. Are schools doing what they supposed to do when implementing the programme? Are all features implemented or are some not? Is the training and support provided adequate? These questions can only be answered by eliciting the experiences of educators and managers at schools that are implementing the programme. The lack of adequate information on how educators and managers experience change may lead to programme developers and initiators, overlooking their challenges and best practices. Gaining a better understanding of their experiences with regards to the implementation of the JiP, will benefit other curriculum practitioners, programme administrators and policy makers.

The scope of the study is on the experiences thus far regarding implementation; the suitability of training and the effectiveness of the resources and support that is provided in improving curriculum coverage. The researcher therefore contends that by eliciting data on the experiences of educators and managers on the implementation of the JiP, their challenges and best practices will be revealed. These may be valuable in informing further studies and curriculum change efforts.

1.5 RESEARCH QUESTIONS

1.5.1 Main Research Question

What are the experiences of managers and educators in the King Cetshwayo District with the implementation of change as implied by the Jika iMfundo Programme?

1.5.2 Sub-Questions

1. What are the experiences of managers and educators with their preparation for the implementation of the Jika iMfundo Programme?
2. What are the views of educators on the Jika iMfundo Programme in relation to how it improves curriculum implementation and coverage?
3. How effective are the resources provided in improving curriculum coverage?
4. What are the experiences of educators and managers of their roles in implementing the JiP?

5. What are the views of educators and managers on the support provided to them for the effective implementation of the Jika iMfundo Programme?

1.6 AIMS AND OBJECTIVES OF THE STUDY

1.6.1 Research Aim

The research aim of this study is to investigate the experiences of managers and educators with the implementation of the Jika iMfundo Programme.

1.6.2 Research Objectives

The research objectives were formulated as follows:

- To determine the how educators and managers were informed about the Jika iMfundo Programme.
- To establish if the training provided to improve curriculum tracking and coverage was adequate in terms of quantity and content and facilitation.
- To elicit the views of educators and managers on the Jika iMfundo as a programme to improve curriculum implementation and coverage.
- To establish if the support material provided to schools are adequate in improving curriculum coverage.
- To establish how educators and HoD's implement the JiP in their respective roles as practitioners and supervisors of curriculum change.
- To determine what actions the school principal has to engage in to manage the curriculum and the implementation of the JiP.
- To reveal the challenges experienced by schools in the implementation of the Jika iMfundo Programme.
- To assess the effectiveness of the support provided to educators and schools in the implementation of the JiP.

1.7 OVERVIEW OF RESEARCH DESIGN AND METHODOLOGY

A research design, according to Gray, Williamson, Karp and Dalphin (2007: 34), is "the overall process of using your imagination as well as the strategy and tactics of science to guide the collection and analysis of data". Once a research question is selected, it dictates the type of research design that is chosen. The choice was between the qualitative and quantitative designs, which have similar components at the beginning, such as the identification of a research problem, formulation of the questions and objectives, but vary in how data are collected and analysed and in the presentation of results (Baskas, 2011: 3).

The qualitative research paradigm was selected, as the research question required the use of this approach and not the quantitative approach, which according to Flick (2014a), should be the main reason for the choice. Another reason for the choice of a qualitative design over a quantitative design is embedded in the explanation by Silverman (2006: 44) when he states that the strength of the qualitative design is that "it can use naturally occurring data to find the sequence (how) in which the participant's meaning (what) are developed and thereby establish the character of some phenomenon". In contrast, the quantitative design can only provide an operational definition of the phenomenon and cannot describe how it is constituted. By considering the experiences of the participants with the phenomenon, the study will be able to develop an understanding of the positive and negative aspects of the JiP.

Of the four types of qualitative research designs, namely phenomenology, ethnography, grounded theory and case study, this study follows a multi-case study design as it "makes it possible to observe and analyse phenomena as a single, integrated whole" (Bullock in Gagnon, 2000: 1). The case study design makes it possible for the researcher to study a case, or multiple cases, over a period of time, through detailed data collection techniques, such as observation, interviews and document analysis and report the findings as case description or as themes (Creswell, 2013).

As put forward by Saldana (2011:3), the researcher chose the case study design "deliberately as it presents itself as a rich opportunity and exemplar for focused study; strategically because it is deemed to represent the most typical of its kind; simply and purposively for convenience".

The researcher's intention was to study how educators and managers at three schools experienced the JiP and to compare these experiences by conducting an in-depth case study. The researcher wished to compare the experiences at each school and between educators and managers for similarities and contradictions in their experiences.

Qualitative research encompasses an array of approaches and methods for the study of social issues. The data and information for a qualitative study that document the lived experience of the participants with a social phenomenon, may be collected from interviews, observations, visual materials such as documents, artefacts, photographs, video recordings, and internet sites (Saldana, 2011: 3). Qualitative methodology relies on words, especially nouns and adjectives that convey what exists (Gray *et al.*, 2007: 42). This means that qualitative studies are mostly exploratory and descriptive in nature. They seek to capture "subtleties of meaning and interpretation" of the phenomenon which the quantitative method that uses numbers does not (Ibid.).

According to Pratt (2006: 5), the researcher's methods must be senstive to a participant's perspectives and must be able to determine from the interaction between the perspective and the situation how they impact on each other. There are four main components of qualitative methods:

1. Establishing a research relationship with the participants one wishes to study.
2. Sampling: which involves decisions on times, settings, and participants from whom to obtain data.
3. Data collection: how one gathers the information to be used.
4. Data analysis: what one does with this information to interpret it (Maxwell, 2008: 234).

Within the context of the study this involved identifying educators and managers that could provide insights on the research problem; explaining the purpose of the study to them; acquiring their consent to participate in the study; making arrangements to conduct the observations, interviews and view documents; and analysing, interpreting and drawing conclusions about the experiences of the participants with the JiP.

1.7.1 Population and Sampling

While all participants who meet the study criteria form the population, the sample is a small part of the population from whom the researcher gathers data. Gray *et al.* (2007: 102) define sampling as the "selection of a relatively small group of individuals from whom we obtain data in order to be able to generalize about a larger group". Making generalizations, however, is the main intention of quantitative research design, as opposed to understanding the characteristics of the population that will help the qualitative researcher answer the research question.

Qualitative sampling techniques are focused on eliciting information from specific groups and subgroups in the population (Hancock, 1998: 2). The sampling technique therefore is the process of selecting a sample to represent the population, so when researchers sample, they actually use

the information accumulated on a few cases to make judgments about a considerable number of cases. To put together a sample successfully, the choice of a sampling technique must ensure that the sample selected is a rich source of relevant information (Flick, 2014a).

Purposeful (non-probability) non-random sampling was used to select information-rich cases for an in-depth study (Patton, 1990: 169). This entailed selecting multiple cases from which the researcher could derive pertinent information on the key issues for the purpose of the study. The district, circuit and schools were selected at the discretion of the researcher and therefore they did not have an equal chance of being selected from the population. Hence, non-random sampling was applied (Gray *et al.*, 2007). The researcher purposefully selected three primary schools in the Richards Bay circuit within the King Cetshwayo district where the JiP was piloted as they would provide rich information to answer the research question.

Although the JiP had been piloted in two districts during the study, the researcher chose to conduct the investigation in the King Cetshwayo District, due to convenience. Convenience sampling is a nonprobability (purposeful) sampling technique with minimal cost, which involves the selection of a sample where the members of the target population met the practical criteria of easy accessibility and geographical proximity (Etikan, Musa & Alkassim, 2016: 2). Convenience sampling was used in this case as the researcher lives and works in this district. Furthermore, the organisations that were to be a part of the case study were ʻconvenientʼ as the researcher was able to ʻnegotiate access through existing contactsʼ (Saunders, Lewis & Thornhill, 2012). A case study was conducted at English medium primary schools in the Richards Bay circuit where the JiP has been implemented in mathematics. A total of nine educators, three from each of the schools that are implementing the JiP in mathematics, together with one HoD and the principal from each of the chosen schools, formed the sample. More details on sampling are provided in Chapter 3.

1.7.2 Data Collection

Data collection is the process of gathering information that will assist the researcher in answering the research question. The main methods of data collection employed in a qualitative study are observation, interviews, and documentary analysis (Pratt, 2006: 9). Hancock (1998) includes focus groups, collection of narratives and use of open- ended questions in a questionnaire.

This study employed semi-structured interviews, observation, as well as document analysis to collect data. In qualitative research, the convergence of multiple methods called triangulation,

added to the study's credibility and trustworthiness (Yin, 2010: 10). These data collection methods will be discussed in detail in Chapter 3.

1.7.3 Ethical Considerations

"Ethics concerns the morality of human conduct" (Mauthner, Birch, Jessop & Mille, 2002: 14). Every step of the research process, from the choice of the topic, to the selection of participants, and providing participants with information about the study, requires ethical consideration by the researcher (Flick, 2004: 41; Given & Saumure, 2008). The three issues of consent, confidentiality and trust are inter-related (Silverman & Davis, 2009: 402). In order to accomplish this, the following principles were adhered to

Informed Consent

Informed consent involves the willingness of potential participants to be a part of a study after being informed of the activities of the study and the possible risks and benefits of participating in it (Kielmann, Cataldo & Seeley, 2011: 54). Researchers, warns Erickson (1985: 142), need to be wise about the care they exercise in being explicit about the uses of and access to the information that participants provide. The author goes on to state that if consent to be studied is freely given, and if subjects have been informed of the purposes of the study, possible risks and benefits to them, "then deception and faking are minimized, as is passive resistance to the researcher's presence". They do so having been informed of the purposes of research and the possible risks to them, as well as the possible benefits. To this end, participants will be sensitised to the nature and purpose of the study, and more importantly, their role in it before they could make a decision to participate or not.

The researcher applied for permission to conduct the study from the head of the KZN Department of Education, to gain access to schools in order to conduct interviews and observations. Written consent was obtained from all participants before the research instruments were administered to them.

Anonymity and Confidentiality

Participants were guaranteed of complete anonymity and confidentiality. Ensuring the privacy of participants in an ethical research project is a key element which some researchers ignore. They commit the mistake of contacting participants, without prior arrangements, cause offence and distress by questioning them and/or observing them without their knowledge (Kielmann *et al.*, 2011: 54).

Participants in this study were assured that the information they provided would be used in such a way that it makes it impossible for others to identify them. Data were collected and processed in such a way as to protect the identity of participants. No names, location and other personal details were provided in the report. Anonymity of the participants and the school was provided through the use of pseudonyms (Halai, 2006: 6).

Voluntary Participation, Refusal and Withdrawal

According to Given and Saumure (2008: 7), the "right to liberty assures people that they have the right not to be studied if they elect to decline an invitation to participate in research". Participants were not coerced into participating in this study. Participation was strictly voluntary. Participants were therefore at liberty to refuse to participate and they were afforded the option to leave the study if they wished to do so. Their decision to not participate was respected.

No Harm to Participants/ Beneficence

Although participants in a qualitative study seldom come to any harm, they may experience humiliation and lack of trust (McMillan & Schumacher, 2006: 335) if they had to divulge information about themselves that was of a sensitive nature. With regards to this study, the phenomenon under discussion was not of a sensitive nature. Participants may, however, not want to trust the information they have to the researcher, whom they hardly know, for fear of being humiliated by their responses or their actions. This principle requires a researcher to provide the participants with information about the risks and benefits in participating in the study (Halai, 2006: 2). This information was provided in a consent form. Participants and the school were not harmed in any way during the course of the study. The researcher ensured that the research participants were not subjected to "undue intrusion, distress, indignity, physical discomfort, personal embarrassment, or psychological or other harm" (Stevens, 2013: 21).

1.7.4 Data Analysis and Interpretation

Analysis of data, according to Strauss (2016: 4), is "synonymous with interpretation of data". The qualitative researcher, according to Hancock (1998:14), is concerned with uncovering the "big picture". Data, which are gathered through various methods, such as interviews, document analysis and observation, are analysed to describe the phenomenon and communicate the meanings of the findings to others. This involved the selection, categorisation, comparison, synthesis and interpretation of data to explain the phenomenon that is being studied (Leedy & Ormrod, 2001: 2) instead of doing statistical analysis.

In this study, content analysis was used to compare and identify patterns in the data since it is a procedure for categorising data from interviews and observations, in order to classify, summarise and tabulate (Hancock, 1998). Data were analysed on two levels, the descriptive and interpretive. Data from the interviews were analysed using a combination of pre-set and emergent categories (Taylor-Powell & Renner, 2003: 3). Some categories were based on the research questions while others emerged from the coding exercise. Structured lesson observations were also analysed using content analysis and then categorised into the themes that appear on the observation schedule (Appendix G). Documents were analysed using a discourse analysis since it is an analysis method used in all types of written text. By using this analysis method with the written documents, the actions of the participants will be revealed. Foucault (in Prior, 2008: 1) states that the contents of documents reveal the actions of the participants in their contexts.

Data collection, analysis and interpretation of the data from interviews and observations were conducted simultaneously and were iterative, while the events were still fresh in the researcher's mind. This was done to circumvent "memory bias regarding nonverbal and contextual issues" caused by "the gap in time between an interview, transcribing, and coding that may affect interpretation of data" (Sutton & Austin, 2015: 4).

Data interpretation involved attaching meaning to the analysis. This involved making a list of key points that emerged from the categorisation and coding, sorting through data and then interpreting and synthesising (Taylor-Powell & Renner, 2003: 7).

1.8 DEFINITION OF KEY CONCEPTS

1.8.1 Curriculum Change/Innovation

Carlopio (1998:2) define change as "the adoption of an innovation, where the ultimate goal is to improve outcomes through an alteration of practices". Furthermore, Robbins and Decenzo (2001: 230) view change as an, "alteration of an organization's environment structure, technology or people". Sheldon (2011: 1) states that "True educational innovations are those products, processes, strategies and approaches that improve significantly upon the status quo". Markee (1997) views curricular innovation as "a managed process of development whose principal products are teaching (and/testing) materials, methodological skills and pedagogical values that are perceived as new by potential adopters" (46). An innovation is a new method, idea, or product that is synonymous with change.

The terms are used interchangeably in this study curriculum change in reference to the Jika iMfundo Programme which seeks to improve the practice of curriculum coverage and curriculum management.

1.8.2 Management of Curriculum Change

Change management is the systematic activity of preparing and implementing ongoing changes in an organization (Ahn *et al.*, 2008: 3). Rouse (2015a: 1) concurs that change management involves having a systematic approach- outlining and implementing procedures- for dealing with organizational and the individual change. These definitions are used to understand and explain the approaches used by school managers in managing the implementation of the Jika iMfundo Programme at their schools.

1.8.3 Curriculum Management

Curriculum supervision/management may be viewed as "a consciously planned programme for the improvement and consolidation of instruction" (Musaazi, 1982: 223), or as the part of the school administration that primarily focuses on the "achievement of the appropriately selected instructional expectations of educational practice" (Zuber-Skerrit & Roche, 2004: 46). Coleman, Graham-Jolly & Middlewood, 2003: 9) point to the fact that curriculum management used to focus primarily on technical tasks such as timetabling, determining educator workloads, monitoring and assessment. Curriculum management is not restricted to the afore mentioned administrative tasks, but is also inclusive of the actions carried out by educational managers in achieving the objectives of school and system improvement concerning students (Tirado & Barriga, 2016). For the purpose of this study all of these definitions are applicable and relevant. They also included how the school management team (SMT) creatively devise programmes and systems within the school to ensure that teaching and learning is optimised.

1.8.4 Curriculum Coverage

The curriculum concerns "all aspects of teaching and learning experiences, such as the intended outcomes of learning, learning programmes, assessment and methodology" (Guiltig, Hoadley & Jansen, 2005:30).

Graham-Jolly (2002: 10) describes a curriculum as a "formal academic programme provided by a school, as reflected on the time-table…a particular course of instruction or a syllabus".

The term 'curriculum' may be viewed in many ways but, for the purpose of this study, it will entail all the content that is intended in a subject. Curriculum coverage will therefore imply the

completion of all activities in the topic, for all subjects on a school timetable, for each grade or phase within the institution as stipulated by the Curriculum Assessment and Policy Statement (CAPS).

1.8.5 Curriculum Implementation

Implementation is the act of executing a plan, policy, model, idea, method for doing something. As such, implementation is the action that has to "follow any preliminary thinking in order for something to happen" (Rouse, 2015b: 1).

Furthermore, Fullan (2001a) lists implementation as the second phase of the change process and concurs that it involves putting innovation into practice.

These definitions have been adopted for the purposes of the study.

1.8.6 Curriculum Tracking

The majority of literature (Ozer & Perc, 2020; Sevilla & Polesel, 2020; Zang & Bray, 2017) defines curriculum tracking as a method that puts children into groups according to their scholastic abilities, ability grouping segregating learners according to ability levels and aptitude. The "ability grouping, sorting, or differentiation, is used for purposive grouping of students in classrooms of the same school" (Ozer & Perc, 2020: 1). However, for the purpose of this study, curriculum tracking refers to the activity of following or monitoring and reporting on how the curriculum is being covered by educators (Metcalfe, 2018; Mkhwanazi, Ndlovu, Ngema & Bansilal, 2018), by not only focusing on the quantity of topics covered and ticking of dates but by also identifying problems and providing support (Metcalfe, 2018).

The curriculum tracker is a resource provided by the JiP to educators to support them to track the delivery and pace of the CAPS curriculum and also forms the basis for the activity of tracking and monitoring the work of educators by HoDs (Dube, 2019). Furthermore, it informs educators of the activities to be completed each day according to the topics taught (Clercq, Shalem & Nkambule, 2018). The completion of the curriculum tracker by the educator, therefore facilitates the activity of tracking their curriculum coverage.

1.9 LIMITATIONS OF THE STUDY

There are potential weaknesses of a study that are out of the control of a researcher which are defined as limitations (Simon, 2011a; Roberts, 2010; Wolcot, 2009). These weaknesses "may or will affect the study in an important way" (Roberts, 2010:139). Limitations should therefore be made explicit early in a study, so that they are not repeated at each new topic (Wolcot, 2009: 34). The main limitation of this study is the limited generalisability of the results due to sample size and the case study design. These together with other methodological limitations and limitations related to researcher bias, time and funding are discussed in section 5.7.

1.10 DELIMITATION OF THE STUDY

"The delimitations are those characteristics that limit the scope and define the boundaries of your study" (Simon, 2011a: 2) so that the study's aims and objectives do not become impossible to achieve (Theofanidi & Fountouki, 2018). Roberts (2010; 139) concurs that these factors, which are controlled by the researcher, may affect the result of the study. These characteristics or factors that the authors are referring to may be and are nor restricted to the scope of the topic, research aims, choice of sample, choice of research paradigm. This study was restricted to one out of the two districts that the JiP has been piloted in. Only three English medium primary schools in the Richards Bay Ward of the King Cetshwayo District formed the sample. All other schools in the district were not included. Secondary schools, private schools and rural schools are not included. The study was focused on the implementation of the JiP in mathematics only and not in other subjects. The experiences of mathematics educators, HoDs and Principals of schools were ascertained on the JiP programme. Other stakeholders such as subject advisors and circuit managers were not consulted. The qualitative paradigm was used to answer the research question and not the quantitative or mixed methods. The intention was also to conduct a detailed study at a few schools to enhance the depth of data on the interpretation of participants with the implementation of the JiP and not to generalise the results to other similar cases.

1.11 ORGANISATION OF THE STUDY

The study is divided into five chapters, as follows:

Chapter One – Introduction and Context

This chapter presents an overview of the study in terms of the rationale and the background of the study; the context of curriculum changes in South Africa; the problem statement, aims and objectives; research design and methodology; clarification of pertinent concepts; limitations and ethical considerations.

Chapter Two – Literature Review

In this chapter, the literature on relevant concepts and theories that underpin educational change and implementation are presented. The features of the Jika iMfundo Programme which are: school improvement through curriculum coverage; Just-in-Time (JiT) training for heads of departments (HoDs) and educators; training of managers on leadership and management and the provision of resources.

Chapter Three – Research Design and Methodology

The focus of chapter three is on providing a detailed description of the research design and methodology employed in investigating the aims and objectives of this study. The justification for the choice of the adopted design, sample and data collection methods and analysis is presented. Measures to ensure trustworthiness and ethics in the study are also provided.

Chapter Four – Presentation and Discussion of Research Findings

In chapter four the findings of the multi-case study are presented and interpreted based on literature reviewed, research questions, information from classroom observation and documents analysed.

Chapter Five – Summary of Findings, Conclusions and Recommendations

The final chapter provides an analytical discussion of findings which are synthesised with literature and theories. Conclusions drawn from these findings which are linked to the research questions, are presented. Recommendations based on the findings and conclusions are presented for policy, theory, practice and for further research.

1.12 SUMMARY

This chapter served as an introduction and orientation to the study. The background and context of the study have been presented. The motivation of the researcher for the choice of this study has been discussed. The research problem is stated, and the research questions, aims and objectives that direct the investigation have been formulated. Furthermore, this chapter provides an overview of the methodological issues and explanation of concepts together with an insight into the organisation of the study.

In Chapter 2, a literature review on concepts and theories that are considered pertinent to this study of education and curriculum change and innovation are presented.

CHAPTER 2

LITERATURE REVIEW

Change is like a planned journey into uncharted waters on a leaky boat with a mutinous crew.

Michael Fullan

2.1 INTRODUCTION

Since the information on the JiP as a programme to improve learner outcomes through curriculum coverage is limited, it was deemed necessary to investigate this phenomenon by focusing on its implementation to gain insights into how it is being implemented at primary schools to improve the coverage of the mathematics curriculum. It is envisaged that successful implementation and management of the JiP will ensure the sustainability of the programme, which will eventually lead to improved learner outcomes After defining the terms and clarifying their scope, a critical analyses of literature on concepts and theories considered pertinent for this study are provided. Learning intervention programmes are explored from a global and South African context with a focus on implementation issues, lessons and implications. Since this study was conducted during the implementation phase of JiP, the issues, lessons and implications are informed by the theory of action and diffusion of innovation theory (DOI). Although the DOI theory was initially used to explain how technological innovations were adopted and diffused through social structures, its importance in education has become evident. Furthermore, these theories provide important insights into how educational innovations are adopted and implemented in educational institutions and by individuals. They also inform leaders of change on the strategies to be employed in implementing and sustaining innovation successfully. The terms innovation and change are used interchangeably in the study. Waters (2009: 422) defines innovation as a "difference or novelty", since it refers to a new or different way of accomplishing or reaching the same goals as before. The JiP is informed by the change theory, so change as a process is explained using the change theories.

The first part of the chapter presents a description and interpretation of literature on educational change and relevant concepts associated with key change aspects which includes the reasons for change in schools, reactions to change by educators and managers, management and implementation of change. The second part focuses on theories that inform our understanding of

the change process and the diffusion of change within institutions. The third part concentrates on educational and curriculum changes and interventions in the South Africa education context.

2.2 CONCEPTUAL FRAMEWORK

This study is framed by relevant concepts and theories that are intertwined and explain the phenomenon of curriculum change. This is in line with the definitions of conceptual framework put forward by experts in the field of research, such as Maxwell (2008) and Miles and Huberman (1994). To Maxwell (2008: 216), the conceptual framework is a "system of concepts, assumptions, expectations, beliefs, and theories", which explains the main concepts of the study and how they are related (Miles & Huberman, 1994:18). The concepts and theories that are selected, are linked and support and inform the study. Since the JiP, has been conceptualised as an education programme to improve the quality of education through the development of teachers' and managers' improved curriculum management skills, the conceptual framework underpins the inextricably interwoven concepts of education change and implementation, teacher development (capacity building), support, change management and curriculum management as keys to implementing the programme successfully.

Beside concepts, theories also form a part of the conceptual framework (Maxwell, 2005). Theories are often used to observe and explain patterns of educational change and understand phenomena. They make it possible for the researcher to link theory with practice or abstract with the concrete (Sunday, 2016: 3). The change theory, action theory and diffusion of innovation theory (DOI) were adopted to explain: the processes involved in the implementation of the JiP; the actions that are involved in managing and implementing change and to provide insights into how change is diffused through an organisation. The study will be conducted within a constructivist approach.

2.2.1 Perspectives on Educational Change

The purpose of this section was to explore selected literature to integrate the study into a broader framework of relevant research, to consider gaps and justify the importance of the study. The various perspectives on educational change from literature have been used as a conceptual framework for this study, since a conceptual framework is built not on facts but on interpretations which have been attained through qualitative data analysis (Jabareen, 2009: 52). Bilgin (2017 :8) emphasises the importance of collecting existing and appropriate information on the research problem to build a conceptual framework. Thus, relevant educational change concepts regarding

curriculum change, curriculum management, capacity building and implementation of the curriculum change process are elucidated in this section.

Change in any organisation is inevitable (Adam, Bauers & Hovemann, 2019; Nevalainen, 2017; Shao, 2017). Change may be regarded as an alteration in organisations, institutions and people (Robbins & DeCenzo, 2001: 230), the implementation of an innovation to improve outcomes (Carlopio, 1998: 2), or as a process to learn new ideas and things (Fullan, 1992: 22). All these definitions are indicative of the need for progress in all spheres of life, failing which, would result in stagnation. The education system, like all other organisations, is not immune to change but, in fact, it experiences change more frequently than most other institutions (Burks *et al.*, 2015). Educational change can be viewed as any educational theory, idea, and innovation which is inclusive of the process of developing, designing, implementing, and evaluating the programmes at the district and national level (Davis, 2009: 5). Fullan (2007: 30), asserts that educational change or innovation is "multidimensional" with at least three dimensions involved when implementing any new programme, policy or initiative: 1) use of new or revised materials; 2) use of new teaching approaches and 3) alteration of beliefs. Educational change involves two crucial aspects, which Fullan (2007: 40) recommends, should not be separated since they interact and shape each other and relate to two questions - what changes are there to implement? (theory of education) and how should the changes be implemented (theories of change)?

While the theory of change conceives change as a process that occurs in a step-by-step linear process involving initiation, implementation and institutionalisation, Hargreaves, Lieberman, Fullan and Hopkins (2014: 284) disagree in light of the fact that the environment in which educational change takes places is "complex and turbulent" and the process is "messy".

In theory, the goal of educational change is to support schools achieve their goals more effectively by replacing old systems and methods with new ones but, in reality, people are unable to determine whether the change is better and for whom and they cannot assume that any given change is worthwhile and should be implemented (Fullan, 1982: 4). Cavanaugh, McCarthy and East (2014) put forward the necessity of education transformation at the forefront of change, as part of continuous improvement. Herman and Herman (1994) concur that educational change is required to improve poor performance at a school.

Sahlberg (2014), documents how Finland transformed their public education system from mediocrity to number one ranking in the world on the PISA (in mathematics, literacy and science)

through educational change. Similarly, countries throughout the world including South Africa hope to bring about school improvement through educational change efforts.

The educationalist Sayed (in Motala, 2005: 31) views post-apartheid transformation in South Africa within the five frameworks of "history; equity and justice; freedom and democracy; the economy and global order; and efficiency, effectiveness and quality". Changes in the South African education system addressed issues of apartheid education, which was unequal and prejudiced, and was segregated on racial lines. These educational transformations in the context of South Africa, in the first five years after apartheid was dismantled, were brought about by policy changes, which "aimed at transforming education at all levels – from pre-primary to tertiary and central to most of those policies were attempts to effect redress and equity, with the ultimate goal of providing education for all" (Lange, 2000: 8).

For change to be implemented successfully there is a need for stakeholders in the organisation to be involved in the process. Substantial change in schools, will be determined by the nature of interactions among stakeholders - that is between school principals, staff, learners and their parents (Blau & Hameiri, 2010: 247). Additionally, Vandeyar (2017: 376) argues that the desired goals of improving education will not be realised if the focus is on altering the methods of teaching and learning and changing the curriculum without changing the teachers, learners, schools, communities. This means that the mindsets of people must change, and the context within which the people exist must change in order to bring about effective change. Orafi and Borg (2009: 252) draw attention to the important fact that for success in educational change, the curriculum innovation must be the "focus of on-going evaluation and periodic review".

2.2.2 The Need for Educational Change

The complexity of a change will depend on its goals and its source of origin (Wedell, 2009). Complex changes in education like a new curriculum introduced by governments, can have nationwide impact or there can be simple changes introduced within educational institutions like the use of new methods (Wedell, 2009: 1). Bently (2010: 32-33) identifies "twin drivers" that puts pressure on schools to change. The first is the need to 'ensure and demonstrate' improvement by students and schools and to reduce the 'gap' in performance between students. Secondly, there is a need to accommodate 'the growing range of need and demand; greater student mobility; changing expectations of students, families and employers; growing economic inequality; and geographical polarisation' (Ibid.). Therefore, education is viewed as a fundamental activity for a successful economy, for social growth and a successful society. This puts pressure on education

systems, as the priority of governments throughout the world is on improving educational quality and the standards (Flores, 2005: 401). All the actions of governments, schools therefore centre on this ideal of providing quality education to learners. Quality in education can be achieved by providing learners with a safe, protective and conducive school environment with fully trained staff and adequate resources for teaching and learning (Bernard, 1999). Teaching and learning which is described as the instructional core (Elmore, 1996) therefore becomes the focus of all educational change. To achieve the ideals of quality in education, Hlomuka (2014: 2) emphasises the importance of "credible monitoring and reporting of what the child learns" so that parents, district officials and/or teachers can determine the extent to which the interest and rights of the child are being protected and preserved and to act on them.

Kraak and Young (2001: 9) also place educational reform at the centre of political, curricular and administrative spheres of influence. Social and political issues in society have led to curriculum changes in Europe (Goodson & Marsh in Weber, 2008: 5). Durkheim (in Adamu, 1994), Nicolai, (2009) and Patil (2012) concur that education is utilised by governments as an agent for social reform. Educational change may be brought on by the need to improve the economy.

According to Fink and Stoll (1998: 297) school effectiveness, school improvement, restructuring, and re-culturing are general trends in the promotion of change in industrialised countries. Amimo (2009) also maintains that there is a need for a curriculum to be continuously evolving to accommodate for the changing needs in society, which are necessitated by environmental changes. Amimo is therefore of the opinion that "there is no likelihood of there ever being a perfect curriculum for all ages" (2009: 2).

Besides political, social and environmental issues impacting educational change, Chen and Hsieh (2008: 73) maintain that the goal of change is to improve practice in the workplace. This view is endorsed by Adamu's (1994: 7) assertion that changes in education are often brought about to address challenges and questions on the existing practices. These may be inclusive of new and improved practices or restructuring of existing ones to achieve the same goals. The challenge for education providers is to keep abreast with new and better ways of educating by developing education experiences for learners that are more relevant for the modern era (Rassekh, 2001). Therefore, educational change, through curriculum innovations, programmes, initiatives and interventions, have a legitimate goal of improving access to quality education for all children, based on equality and access to all (Hopkins & Harris, 2003) and to improve the quality (efficiency, effectiveness and equity) of educational institutions (Thankachan, 2015: 125).

In Fullan's (1991: 15) view, educational change supports schools to achieve their goals more effectively through the replacement of some of the old structures, programmes and/or practices. National education departments and education institutions, such as schools, will only be able to improve the quality of outcomes if they are aware of their shortcomings (Colby, Witt & Associates, 2000: 5). This can be realised through self-assessment. Systems that are open to change will conduct regular self-assessments and use the data collected to improve learner performance, learning environments, teaching content, processes and outcomes (Ibid.).

2.2.3 Management of Educational Change

The management of change, according to Barret (2012:1):

> *is the process of planning and executing major change steps in an organization to achieve the organization's goals, maximize the positive impact on employees who do the work after a change, and help leaders and staff make the new ways become a habit.*

Educational managers, like principals and HoDs, have a responsibility to manage the implementation of change. In doing so, they have to "cope with the complexity of education reforms, the task of implementing them and the new regime they imply" (Wallace & Pocklington, 2002: 8). Managers and supervisors must first accept and support the change in "active and observable ways" before they can support their employees (Prosci, 2016 : 2).

Morrison (1998: 15) is of the opinion that for change to be successful, it needs to be successfully managed, and for managers to be successful, they need to manage change successfully. So the success of change management and the success of a manager are reciprocal. Fullan (2007: 138) draws attention to the difficult role of the principal in executing the duty of change manager successfully. He posits that change managers should first undertake critical assessment which involves determining whether the change is desirable, implementable and worth the effort "because it will be worth the effort if it is worthwhile" (Fullan, 2007: 119).

The key to the success or failure of any educational transformation is the ability of stakeholders to manage the change effectively and one of the aspects of change management is implementation (CLF, 1999). The management of an innovation/change is crucial to avoid the failure of implementation since adoption does not imply automatic implementation of innovations. Contextual factors at institutions must be planned and catered for as the successful implementation in one place does not necessarily mean it will work elsewhere (CLF, 1999: 3). Information about the location of the school, the learners that attend the school, the parent community and the school

itself are important contextual factors that are identified by Renner (2019). Besides planning to accommodate these contextual factors, the support of stakeholders must be attained as the adoption of an innovation takes place through collaboration, Wilson (2015: 2) proposes the following strategies for attaining the support of educators in the implementation of innovations towards positive change:

- the change leaders must regularly draw attention to and clearly communicate the 'observable benefits' of adopting an innovation;
- the 'innovators' (people who readily adopt the innovation), also known as opinion leaders, should be utilised to communicate positively about the innovation to the others;
- organise the support of the organisation by promoting changes in policy and procedures to enable the adoption of the innovation
- make use of resources such as social media and electronic channels to promote the change.

Three areas of curriculum implementation that are neglected are planning, application of change strategies and conducting staff development (Patterson & Czajkowski, 1979). Castellano (2016: 18) promulgates that education change can also expose organisational dysfunction, rather than cause it, because of underlying pre-existing issues such as poor leadership and lack of collaboration. Research into the management of innovations in British schools suggested that head teachers (principals) take the lead in the management of the three phases of the change process (Wallace, 2005: 150). Principals have to lead by example and they need to understand the change process, plan for the change, understand the innovation and be able to communicate this to educators. They are also expected to provide support structures and motivation to ensure that the implementation is successful and they need to nurture an environment that will lead to successful change. Swanepoel and Booyse (2006: 190) attribute the changing roles, responsibilities and increasingly unmanageable workload of the school principals to current international trends within educational reform, to decentralize decision making powers to the local and school level. Many principals, they aver, do not have the time for and lack the understanding of their leadership roles (Ibid.).

Fullan (2007: 44) isolates ten elements of successful change that should be considered by change managers: the goal of change should be on closing the gap in the performance of low-income and high-income groups; concentrate on improving the three basics (literacy, numeracy and emotional intelligence); drive the process by "tapping into people's dignity and sense of respect"; get the best people to work on the problem; recognise that change through action is more successful than change through planning; consider lack of capacity is to be the initial problem and thereafter work

continuously on improving it: provide continuous direction to stay on course, by exercising the authority of leadership; develop internal accountability which must be linked to external accountability; establish conditions which foster positive pressure; all of the previous nine strategies must be utilised to foster public confidence.

Notwithstanding the fact that changes within schools are often brought on by external forces, the need for improvement in all areas of schooling is continuously giving rise to changes within schools. Change managers therefore need to juggle internal and external innovations regularly. Shirley and Noble (2016: 144) use the metaphor of a race to explain change management, describing it as an 'endurance race' and not a 'sprint' which requires stamina and perseverance. These authors warn that resistance to change should be anticipated and planned for. Nadler (in Morrison, 1998: 41) identifies the three problems that may be encountered by managers in the change process and advocates the action required for these to be resolved.

Table 2.1: Problems Experienced by Managers and Action Needed (Adapted from Morrison, 1998: 41)

PROBLEM	ACTION NEEDED
Overcoming resistance, i.e. the need to motivate change.	Motivate the change; identify and expose dissatisfaction; building involvement and ownership; provide incentives; provide adequate resources and support.
Ensuring control, i.e. managing the transition effectively.	Develop and communicate a vision of the desired state; identify and utilise points of leverage in the practice and support systems for smooth transition; develop a monitoring and feedback systems and practices.
Managing power, i.e. shaping the political aspects and dynamics of change.	Identify leadership and the nature of leadership support; use variety of practices that create energy for change and sustain motivation and commitment.

The management of change involves planning for each stage of the change process. This might necessitate identifying: 1) the tasks to be accomplished at each stage (i.e. what actually has to change); 2) the roles and tasks of participants; 3) facilitating factors at each stage; 4) inhibiting factors at each stage; 5) the strategies to be used to address the inhibiting factors; 6) the leadership tasks at each stage; 7) the nature of the support needed at each stage; and 8) the criteria for evaluating the success of each stage (Morrison, 1998: 20). Ferlazzo (2015: 1-2) proposes the following model for change management:

- Involve faculty: Faculty refers to those that are intimately involved with the change. The belief is that the high involvement of change agents will result in higher morale, ownership and self-efficacy.
- Follow a process: There needs to be a process that will guide how members proceed, make decisions and engage with each other constructively.
- Allow for personalization: Since change is a personal experience, people may feel vulnerable to exposure. Allowance should be made to accommodate for personalized instruction.
- Small steps: Teachers should be allowed to change and modify their practices in increments.
- Develop a common lexicon: Everyone needs to use a common language to express their ideas.
- Embrace divergent points of view: Managers need to learn to listen to the views of others and understand the different perspectives of the concepts. By doing so, they demonstrate that they care.
- Link changes to actions that can be done by teachers or others: Teachers must be given specific information of what and how they must do things.
- Provide needed professional learning: Refresh skills and update content knowledge of educators and allow them to view examples of best practice.
- Coaching, coaching, coaching: Give teachers much needed feedback on their efforts in changing their practice. Together with coaching, they should be afforded the opportunity to interact with their peers. This will give them a sense of confidence.

In Fullan's (2001a) view all successful schools, experience "implementation dips" as they move forward. This implementation dip refers to the decline in the performance and confidence of educators as they experience the innovation that necessitates the learning of new skills and the acquisition of new understandings. Fullan (2001a: 6) clarifies that this is a result of educators experiencing a "social psychological fear of change, and the lack of technical know - how or skills to make the change work". Leaders need to be sensitive to an implementation dip. While they are seriously resolute in their desire to achieve successful results, their actions need to focus on ensuring that the momentum for change is gained and maintained.

In a four-year study focusing on degrees of success in school improvement in urban high schools, Miles and Louis (1990: 57) sum up the difficult task faced by change leaders in this statement: "Leadership and management of change is a matter of dealing with uncertainty, complexity,

turbulence and the cussedness of many different people". What these authors also found, in essence, is that leading and managing change within a school is a complex undertaking, in which one can expect to encounter opposition and a period of instability. In order to achieve successful change, the principal must anticipate and plan for these situations. Besides having to deal with the complexity of change, SMTs are faced with negative attitudes from educators, the pressures brought down upon them by the education district offices, the pressure to succeed and the pressure to set a good example. Furthermore, most SMTs also teach, so they also have to deal with an increased burden of administration work that change entails. Miles and Louis (1990) highlight the tremendous task required of SMTs in planning and preparing for the implementation of any change, irrespective of its origins.

The significance of this study is in the focus on the experiences of both educators and managers with the implementation of the JiP. The JiP focuses on improving the capacity of principals in the execution of the duties as change leaders.

2.2.4 Educators and the Change Process

Change is multifaceted and complex (Fullan, 2012; Wallace & Pocklington, 2002) and therefore requires complex actions. Fullan (2012: 25) attests that, when conditions are uncertain, "learning, anxiety, difficulties, and fear of the unknown are intrinsic to all change processes especially in the early stages". The author goes on to recommend the need of a "risk taking mentality and climate' for people to embrace uncertainty. Failure to do this, he says, will result in no significant change taking place. The individuals who are tasked with implementing the changes within the structure of the school, "teachers' capacities to deal with change, learn from it and help students learn from it will be critical for the future development of societies" (Fullan., 2012: 1X). The opinions and views of educators on the change process are therefore critical in understanding and implementing educational change successfully. Spillane (1999: 144) points out that although policy makers and reformers are critical agents for the successful 'enactment' (implementation) of reform at a local level (school), it is the teacher who is the 'key agent for improving classroom practice."

A policy change or an amendment in existing activities/methods in education necessitates a behavioural change and a change in the belief systems of educators. Educators have to learn new behaviours and new ways of thinking (Shen, 2008: 75). According to Mâță (2012: 512), change in teachers is important since teacher resistance to change is considered the main barrier to curriculum innovation. Gawe, Jacobs and Vakalisa (2004: 314) argue that school teachers will not change their classroom practice and persist with their habitual ideas if they fail to recognise and

accept the change as a beneficial alternative. Educators do not always resist change. Richardson (1998: 1) put forward two types of change: mandated change and voluntary change. Mandated change (also referred to as an external approach, or a top-down change) (Clement, 2014: 1) is initiated by the government, education department (bureaucratic level) (Richardson, 1998; Clement, 2014; Ashraf, 2019) and "transmitted to schools, where it is adopted by the administration and communicated to teachers, who will probably attempt to implement it with varying degrees of enthusiasm and success" (Clement, 2014: 1). Basically changes to the curriculum, curriculum policies, and other polices are deemed to be mandated changes (Ashraf, 2019). Educators often resist this kind of change that is suggested by others, while they engage in a change that is initiated by themselves (Richardson, 1998). Ashraf (2019: 66) argues that the provision of spaces for educators to innovate and take their own initiative within a mandated change, will provide them with the "autonomy to respond to mandated changes using their own ideas and judgement".

Burks *et al.* (2015: 254) aver that the older teachers are the ones that are criticised for not embracing and implementing change willingly, while Sikes (in Burks *et al.*, 2015) attributes this negative attitude to the fact that educators are mere implementers of change and are not given opportunities to input in the development of innovation. Bailey (2000), reiterates this by pointing out how teachers often start off eager and enthusiastic about mandated change but lose interest and gradually become resistant because their inputs are disregarded in the context and process of the change.

Many teachers are not open to change because of its implications. They fear that the proposed change "will not work or will make matters worse" (Fullan & Hargreaves, 1992: 5). Although South African teachers' inability to change has been listed as one of the reasons for learners' poor performance, the teachers as the implementers of change deserve to be appreciated and not marginalized in the process (Priestley & Sime, 2005). It must be understood that change places undue pressure on teachers. They have limited time and resources to make sense of the new content, insufficient training to implement the change, an increased workload and "lack of effective management" (Priestley & Sime, 2005: 489). Furthermore, Hall *et al.* (in Gundy and Berger, 2016: 233) maintain that the decisions about degrees of acceptance or rejection of specific innovation made by individual teachers are not a function of the "public reasons usually given, but because of the specific concerns that they develop". Therefore, Gundy and Berger (2016: 233) argue that the initial activities of developers should be focused on addressing the concerns of individual educators so that the innovation is successfully integrated at schools.

According to the American Society for Quality (ASQ, n.d.: 1) educators must understand what continuous improvement is and why it is required before they can confidently accept it and help alter the nature of their schools. The involvement of educators in curriculum development increases their level of commitment, ownership and participation Kelly (in Govender, 2013). A study conducted by Thompson, Bell, Andreae and Robins (2013: 3), on the implementation of computer science as a subject in New Zealand high schools, found that while the teachers were generally well motivated, many of them re-counted a number of "roadblocks to implementation", which included:

- *a lack of available support resources such as lesson plans, assessment exemplars and workbooks,*
- *difficulty finding quality material appropriate for familiarizing themselves with the topic,*
- *a lack of confidence or experience with programming, and the need for more beginner-level explanation, support and practice, and*
- *insufficient time or available professional development opportunities to adequately prepare for the new standards.*

Murphy Morobe, the chairperson of the Programme to Improve Learning Outcomes (PILO), in his consultation with educators on the introduction of the JiP, was encouraged by their willingness to improve learning at their schools for him to observe that change is possible (Ngcobo, 2014: 1). This speaks of the vital role played by educators in the interpretation of education policy and it is therefore imperative that they are developed professionally to meet the challenges of implementing these new education policies in schools (Le Roux & Maila, in Maimela, 2015: 3). Since the people within the organisation (educators) are the ones who must ultimately alter their thinking and working practice for the successful implementation of change, they can either be the stimulus for change or they can resist it with seriously negative outcomes (Tearle, 2004: 334). Their individual attitudes and beliefs are therefore important and seen as one of the main goals in implementing change (Ibid.).

Education is a calling which requires dedication and perseverance in professionals who will sustain innovations at schools over long periods. If educators really have a calling towards the teaching profession, they would stay the course no matter what challenges they encounter (Shirley & Noble, 2016: 144).

Zepeda (in Ferlazzo, 2015: 1), a professor in the Department of Lifelong Education, Administration, and Policy at the University of Georgia (Athens), responding to a question on 'how administrators should lead changes and new initiatives', in an education blog, said the following about educators and the change process:

> *As teachers and leaders, we are in the business of learning, and learning is in many ways about change. Change can only survive the "nay-sayers" in a school culture that embraces collaboration, where teachers are a part of the change process, and where policy is made public. Transparency is the watchword.* (Zepeda, in Ferlazzo, 2015: 1)

Research conducted on teacher preferences in South Africa, one country of a ten-country study conducted by the Consortium for Cross Cultural Research in Education (CCCRE), which examined the secondary school teachers and principals' willingness to take responsibility for bringing about educational change, found that South African teachers, as compared to their counterparts in other countries, showed a greater desire to be involved in change activities; SA teachers did not want to be mere recipients and implementers of change and teachers wanted to be given a voice in the change process and be more involved. SA principals, compared to their peers in other countries were more prepared to support the involvement of teachers in most of the initiatives mentioned in the study (Booyse & Swanepoel, 2015: 219).

Educators will remain wary of change if there is no full disclosure of the nature and the reason for change by the change leaders; they are not given appropriate resources to implement the change; they are not supported and motivated by the change leaders, and if they are not afforded enough time and training to implement the change (Skogan *et al*., 2000; Fullan, 2001b).

2.2.5 Challenges experienced in the implementation of change

Both international and national studies into curriculum change reveal that the implementation stage is fraught with challenges (Govender, 2013; Kim, Tan & Talaue, 2013; Maharajh, Nkosi & Mkhize, 2016; Moodley, 2013). Challenges ranged from lack of dissemination of information (Govender, 2013), to inadequate training and support provided and also to the problems with the change itself (Maharajh, Nkosi & Mkhize, 2016; Moodley, 2013).

Maharajh, Nkosi and Mkhize (2016), in a study on the experiences of educators in the implementation of CAPS at primary schools in KZN reported that the implementation was impeded by the challenges attributed to the lack of resources and inadequate training that were

experienced by the educators. They concluded that an understanding of the dynamics of curriculum change in South Africa is largely dependent on paying attention to the constraints and challenges influencing curriculum change. In a similar case study on the implications and challenges of CAPS, Moodley (2013) concluded that the lack of proper training, insufficient resources increased workload and overcrowded classes presented a challenge to the efficacy of the implementation of the curriculum.

Govender (2013: 3) reiterates the challenges that riddled the previous curriculum changes in South Africa that resulted in their revisions. These were related to the unrealistic timeframes for the implementation of change, the lack of proper information, lack of knowledge on the change, and unsustainable professional development programmes. The lack of adequate substantial support in classroom practice and direction and supervision in implementing the changes required were lacking in the implementation of the FFLC (Govender, 2018: 1).

Other authors concur that the challenges during implementations of change need to be addressed if the hard work of the planned change is to be translated into successful implementation, which in turns brings about the intended change (Govender, 2013; Moodley, 2013 & Maharajh, Nkosi & Mkhize, 2016).

Finding from international studies are congruent with those in South Africa (Cheung & Wong, 2012, So & Kang, 2014) in a large-scale study into the progress of curriculum reform in Hong Kong, Cheung and Wong (2012) observed that Hong Kong was still experiencing challenges in the implementation of curriculum reform. The heavy workload of teachers, learning diversity in the classroom and the teachers' inadequate understanding of the reform, are obstacles that are common with the rest of the world (Ibid.).

The Korean education system, which implemented the international achievement assessments, to achieve sustainable success that could be sustained to meet the demands of the twenty-first century learning environment, also encountered challenges with students' low interest levels, unhappy students and increasing numbers of deskilled teachers (So & Kang, 2014). Challenges have to be addressed for optimal implementation and institutionalisation of change. In comparison to the studies cited in this section, Kimonen and Nevalainen (1996: 31) posit that the challenges and obstacles encountered by educators in school activities, form the basis for their learning motivation and encourage them to develop of their work.

2.2.6 The Jika iMfundo Programme

This section seeks to elaborate on the programme itself and what it seeks to accomplish as an intervention at KZN schools. The former Minister of Education and Culture (MEC), Peggy Nkonyeni, in her 2015 budget speech, announced the JiP as the KZN DBE's major innovation. She defined it as "A provincial initiative to improve learning outcomes by supporting teachers, school management teams and districts to track curriculum coverage by learners and provide differentiated support to schools, teachers and learners". In addition, the JiP's focus is on "developing strong curriculum management skills at district, school and classroom level in a way that coordinates and supports the management conversations within and between all three levels" (DBE, 2015: 4). Embodied in the statement made by the former MEC is the explanation of what the JiP is and the purpose and reason for its introduction which includes improving learning outcomes by building the capacity of educators and managers in curriculum coverage.

Morobe (in Joyce, 2014) avers that the JiP being implemented in King Cetshwayo and Pinetown districts was designed to overcome the challenges that schools face with the objective of improving performance. The Pinetown district director concurred that the focus of the campaign is on building systemic support and capacity to improve teaching and learning at schools (KZN DoE, 2016: 1). Ramrathan (in Mlambo, 2014) points out that since previous provincial department interventions which looked at teacher development, curriculum changes and improving leadership capabilities of principals were unsuccessful and had yielded no positive results, the JiP required collaboration between developers and schools. In this author's view "it makes sense to go directly there, be there and work with the teachers and learners" (Ramrathan, in Mlambo, 2014).

Metcalfe (in Mlambo, 2014) states that she was looking forward to the results of the implementation of the JiP, but acknowledged that the improvement would not be the same for all schools.

The following observations about the JiP are deduced from Metcalfe's (in Mlambo, 2014) comments to the press: The JiP is different from other programmes "as it would work within the system and support the government to lead the change, rather than the change being led from outside" (Metcalfe, in Mlambo, 2014).

Lessons were learned from other unsuccessful initiatives, which led to the focus of the programme being on the whole district and not on selected schools for a pilot study. The first test for the programme was to change the relationships between teachers, principals and district officials and to introduce new ways of supporting each other to cover the curriculum effectively. Learner

performance in matric exams and annual assessments would be used to evaluate the effectiveness of the intervention. Regular monitoring of the programme would be conducted to ensure its effectiveness. The DBE considered the provision of support to teachers, principals and the district in curriculum coverage to be the only way by improve teaching. Subject heads have to support to teachers and districts support schools in an effort to develop the teachers, and schools respectively rather than make judgements on their performance.

A summary of the JiP, with regards to the districts, schools and groups that were targeted by the programme, the type of training, support and resources that were provided and the theory of change that underpins the JiP, is provided in Table 2.2.

Table 2.2: Summary of the Jika iMfundo Programme (Adapted from Sayo, 2016)

Whole District Model		
	District	Characteristics of Schools
	• uThungulu (King Cetshwayo)	Primary schools; small schools; multi-grade; predominantly rural; limited material resources; poor educational performance 30%; primary Schools ANA below 40%.
	• Pinetown	Mixed urban/rural; 358 primary schools.
Schools Targeted	All primary schools in the two districts.	
School Numbers	• 391 King Cetshwayo. • 345 Pinetown.	
Target Groups	• Foundation Phase Heads of Department. • Lead teachers.	
Training	• Training delivered by subject advisors. • FP HoDs and lead teachers trained three times per year.	
In-School Support	Provided by subject advisors according to district norms.	
Resource Provision	• Home language: isiZulu lesson plans, trackers, readers, posters. • Mathematics: lesson plans, learner activity books, mathematics dictionary.	
Change Theory	• If curriculum coverage improves, then learning outcomes will improve. In order for curriculum coverage to improve, the following behaviours associated with curriculum coverage must improve: ➢ Monitoring curriculum coverage. ➢ Reporting this to the level where action can be taken; the provision of supportive responses to solve problems associated with curriculum coverage.	

The KZN Department of Education monitored the implementation of the JiP and the former KZN Minister of Education made the following observations on the JiP from from the pilots-at-scale in King Cetshwayo and Pinetown districts:

- More than 3000 SMT had attended module 1 of the training for school management in term one of 2015 which was provided by the district.
- More than 4000 HoDs attended the JiT workshops in term 1 which were facilitated by subject advisors. The term 2 training had an overwhelming response.
- 25 000 teacher toolkits were distributed by the JiP to assist educators plan and track curriculum coverage and assessment, integrate the resources such as the DBE workbooks into their planning and reflect on the progress of learners and to engage in evidence-based conversations with the HoDs about their performance. The toolkit for Foundation Phase educators included curriculum trackers and lesson plans in subjects catered for by the JiP. These lesson plans included readers and mathematics learner activity books. Approximately

  200 000 mathematics learner activity books were distributed in the first two terms of 2015 (Government of South Africa, 2015).

According to the theory of change informing the JiP, the following specific actions are required by educators, HoDs, principals, circuit managers, subject advisers and district officials in order to accomplish effective curriculum coverage:

- Educators must consistently plan, track and report on their teaching and reflect on learning.
- HoDs must regularly check teachers' curriculum tracking and learners' work. They must work with teachers to improve curriculum coverage and assist them with problems related to curriculum coverage.
- Principals must meet with the HoDs regularly to review curriculum coverage and tracking. They must take necessary action to improve curriculum coverage and supervise the entire curriculum management at the school.
- Circuit managers must engage with schools and identify and solve problems around the management of curriculum coverage.
- Subject advisers must train and support HoDs to supervise and support the teachers in curriculum coverage.
- District officials need to work across silos (disciplines) to provide data-driven problem solving and support to schools (Metcalfe, 2014: 42).

In this study the researcher investigated educators, managers' experiences with the implementation of the JiP. This implied an investigation of the activities that they were engaged in which are listed above.

2.2.6.1 Capacity Building

Capacity building is about assisting teachers and organisations to react effectively to change and to improve continuously, with the intention of raising standards (Fullan, 2001a: 234). This stance on building the capacity of teachers and schools is supported by Bokova (2015: 2), who states that "Teachers and schools need to be given the means to fulfil their mission of giving students the skills and knowledge they need to gain decent employment and contribute to society".

Educators need to be supported and developed to understand and implement curriculum change and revision. When education systems change in response to social. economic and individual need, the schools are affected the most as they need to implement the change. The success or failure of the innovation or curriculum change depends on the capacity of the stakeholders (policy makers, principals, educators and parents) at this level to meet the challenge (OECD, 2012: 1).

Teachers find professional development appealing as they believe that it will "expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students" (Guskey, 2002: 382). Similar views of educators are presented in a study by Gemeda and Tynjälä (2015) on the professional learning of teachers in Ethiopia. Teachers understand the need for professional development in improving the performance of learners.

Capacity building can take place: vertically - where an intervention comes from the central and regional levels to the schools, or horizontally - where knowledge is shared amongst individuals and groups across levels, on best practices in policy implementation and outcomes of implementation (OECD, 2012: 2). With regards to the JiP, the former is true, as the programme for buiding the capacity of educators, managers and disctricts was provided by the KZN DOE. Access to information, the ability to use the given information efficiently and as intended, and reinforcing desired changes in behaviour to build new reflexes and new patterns of working, are considered vital elements in building the capacity of individuals and institutions (Ibid.). Holborn (2016: 1) points out that although education receives 20% of South Africa's budget, it does not translate into improved learner performance.

Teachers are blamed for South Africa's declining education standards (Modisaotsile, 2012: Holborn, 2016; Spaull, 2013). Holborn (2016), cites Silman and Rosenberg respectively, who

admit that teachers do not possess adequate content knowledge, especially in mathematics and science, and therefore teach only the parts of the curriculum that they are comfortable teaching. This poses a challenge in achieving quality education, since Tas (2012: 1) argues that "Teachers' quality and proficiency are the most important factors for educational activities to attain success. Quality teachers are the single greatest determinant of student achievement". This was shown in studies conducted in Uganda on the performance of learners in problematic curriculum areas and teacher effectiveness. The results indicate that students performed consistently better (in literacy, numeracy, and biology) when they were taught by educators who possessed advanced levels of content knowledge (Najjumba & Marshall, 2013: xix). The findings strengthened the importance of teachers and their knowledge of the subject matter in affecting student achievement. It is therefore the combined responsibility of educators and the DBE to improve the capacity of educators.

School leaders (principals) are also responsible for the achievement of learners at schools (Ediger, 2014; Soehner & Ryan, 2011), strong instructional leadership, supervision and monitoring skills, and must, therefore, be enhanced through professional development opportunities, in order to ensure that there are effective curriculum management procedures in place at schools (Johnston, Kaufman & Thompson, 2016).

The aim of the JiP is twofold: while it seeks to bring about improvements in learning outcomes, it simultaneously focuses on improving the capacity of the various levels of the education system (Metcalfe, 2014: 3). The National Educational Collaboration Trust (NECT), which is funding the JiP, is fully invested in improving the performance of educators, by providing developmental interventions on competence in subjects, teaching methods and in managing the curriculum (Mabaso, 2016). Newman (in Fullan, 2001a: 234) intimates that professional development focuses on knowledge, skills and the disposition of individual teachers to improve their classroom practice. Capacity building is concerned with guiding and directing the work of educators in a "highly interactive professional setting" (Ibid.: 236).

The JiP seeks to improve the capacity of educators in by providing them with JiT training. The reality of the matter is that many educators may not possess the pedagogical content knowledge to teach the CAPS prescribed material (Metcalfe, 2017: 55). Results of the study conducted into the teachers' views on professional development opportunities revealed that educators realise the relationship between improvement in schools and capacity building through professional development opportunities (Altun & Cengiz, 2012). Support in understanding the content is

therefore provided by the JiP through the provision of planners and trackers and JiT content workshops. These are conducted thrice a year and facilitated by subject advisers on content (Metcalfe, 2017). JiT training is defined as a "scheme in which the required knowledge and skills are imparted for immediate application, to avoid loss of retention due to a time gap" (Parsons, Shils & Smelser, 2015). According to Gutierrez (2016: 3-5), JiT training which means having knowledge just when you need it, enhances employee productivity, speeds up the learning process, improves learner access to knowledge, creates more engaged knowledge and optimizes knowledge retention. Additionally, Tulgan (2013: 1) avers that "If a training tool anticipates the learner's real-world skill and knowledge gaps and makes the right information easily available to fill those gaps as needed, it's just in time".

Many educators steer away from certain topics in mathematics, which they consider to be challenging, because the topics are abstract, such as operation of fractions, and measurement of area (Ghana MoE, n.d.:3). The Ministry of Education in Ghana, in their provision of in-service training, realised this and stated that these problems could be eliminated with proper strategic planning. According to the Department of Education (2005: 10), any training should focus on providing educators with content knowledge and with relevant methodology so that they are equipped with the 'what' and 'how' when they return to the classroom. Training is also provided to build the capacity of SMTs in instructional leadership, supervision and on managing curriculum coverage with the aid of supervision tools (Mabaso, 2016; Witten & Makole, 2018). Fullan (2006; 2007) listed capacity building as one of the actions required for successful implementation of change. The experiences of educators and managers with the implementation of the JiP will provide key insights into the adequacy of the training and capacity building opportunities provided for the improvement of curriculum coverage.

2.2.6.2 Provision of Resources

Many curriculum innovations fail because educators are not equipped with proper resources to implement change (Badugela, 2012; Lizer, 2013). Compared to C2005 and RNCS, CAPS provided more resources with regards to detailed policy documents for each subject but educators have still struggled with their planning and content knowledge (Moodley, 2013). This was shown in research conducted in 2005 where Grade 3 teachers attempted Grade 6 learner tests in Languages and mathematics, which revealed teachers obtaining average score of 65% in mathematics and 55% in literacy (Education, 2011: 3). Educators should have produced a very high average compared to learners but this was sadly not the case. Educators' limited knowledge

of the content will have a detrimental impact on the content knowledge of learners. The DoE has identified these issues and, through JiP, have provided educators with all the resources they need to plan, deliver and track learners' curriculum coverage. and with JiT training workshops to improve their knowledge of the subject content. Curriculum planners and trackers assist in this regard (Government of South Africa, 2015). These materials and tools which were provided to schools were developed in a collaborative effort between the department and PILO officials, to bring about significant engagement around collective identification of problems, finding solutions and providing support to each other in a relationship where each person is mutually accountable Metcalfe, 2017: 47).

The JiP provided the teacher toolkit with the intention of empowering educators of mathematics to improve their pedagogy by planning adequately before each lesson. The lesson plans they are given cover all the topics in the CAPS curriculum, and they provide educators with step-by-step instructions on how to teach each topic. Required resources are indicated or are made available in the toolkit. Specific times are allocated to the various aspects of lesson presentation. Educators are required to use these resources and plan carefully before presentation.

The times allocated for mathematics in the CAPS curriculum have not been changed under the JiP. It remains 6 hours per week for grade 4, 5 and 6, and 5 hours a week for grade 7. The following times are allocated for a mathematics lesson, presuming the lesson is 90 minutes long.

Table 2.3: Breakdown of a Mathematics Lesson

LESSON TOPIC	TIME ALLOCATION
Mental mathematics	15min
Correction/reflection on homework	15min
Lesson content	30min
Classwork	25min
Homework	5min

The lesson plan takes into consideration the following aspects that educators must focus on:

- CAPS topic.
- Lesson vocabulary.
- Prior knowledge and lesson concept.
- Assessment.
- Remediation.
- Enrichment.
- Mental mathematics.
- Correction/reflection on homework.
- Lesson content/concept development.
- Classwork activity.
- Homework activity.
- Reflection.

Based on the breakdown in the table above and the aspects listed, the Jika iMfundo Programme curriculum planners and trackers assist educators with the following aspects: planning for the coverage of the content for the day, week and the term; it aligns the CAPS content to textbooks and the DBE workbooks; tracks coverage of the content by maintaining records when learners have mastered the topics, allows educators to reflect on curriculum coverage for the week and use the reflection, trackers and learners' work to prepare for one-on-one evidence-based conversations with the HoD or any delegate (Metcalfe, 2017: 50).

Learners' support material is important in improving the acquisition of knowledge for learners as it provides them with opportunities to practice the skills they learn in class. A study conducted by Ristevska, Kochoska, Gramatkovski and Sivakova (2015) on the role of workbooks in the learning process revealed that workbooks are used for the following reasons: as a source of knowledge to introduce a lesson and to study; to practice what is learned in class, at home and at the beginning of a lesson and for study purposes, to determine acquired knowledge.

Learners are provided with DBE workbooks in mathematics, English and life skills in the Foundation Phase. They also have DBE workbooks in mathematics, English (FAL) and isiZulu (HL) (Metcalfe, 2017). Learners from grades 4 to 7 have mathematics workbooks, and English workbooks from grades 4 to 6. These workbooks are provided by the DBE and soft copies are available for download on the KZN DoE website (KZN DoE, 2010). FP learners have also been

provided with JiP workbooks to ensure that educators have quality activities for learners to do at school and as homework.

The JiP through the provision of supervision tools and training to HoDs, deputy principals and principals, aims to enhance their role in supporting and supervising the work of educators in the area of curriculum coverage (Witten & Makole, 2018: 94). HoDs are provided with digital copies (on USB memory drives) of templates of supervision tools, which they can use in the format provided or adapt to suit the needs of the school. These tools are intended to assist HoDs and principals to monitor curriculum coverage and obtain evidence to conduct one-on-one conversations with educators. This is also a mechanism for teachers to reflect on their professional practice with their peers (Mabaso, 2016).

2.2.6.3 Curriculum Coverage

The JiP is informed by the theory of change which states that if curriculum coverage improves, then learning outcomes will improve (Metcalfe, 2014; Sayo, 2016). This can be achieved through monitoring curriculum coverage, reporting to higher levels for action to be taken and providing supportive responses to solve problems on curriculum coverage. Research conducted at the TIMSS and PIRLS International Study Centre in Boston using data from eight countries, including Armenia, Iran, Italy, Lebanon, Netherlands, Norway, Slovenia, and Sweden found that student performance varied across different topics within the larger content domains (i.e., algebra, calculus, and geometry) in relation to curricular and instructional coverage (Arora, 2010: 7). This is in keeping with findings from other studies (Chen & Hsieh, 2008), where educators named learners' opportunity to learn (OTL) as a major contributing factor to higher levels of mathematics achievement in Asian countries compared to the United States. Studies show that curriculum coverage is crucial to students' opportunities to learn (OTL) and students must be afforded adequate opportunities to cover the materials and understand the content presented to them (Arora, 2010; Stols, 2013). This notion is also found to be true in a study conducted by Cueto, Ramirez and Leon, (2006) in Peru on students' opportunities to learn mathematics. Following on from studies that showed that Peruvian students' performance in mathematics extremely poor, they investigated the opportunities that students have to learn mathematics. They found that these students had not completed all activities, implying that the curriculum coverage was lacking (Valverde, 2014). According to an article in the *Mthatha Express* (Reporter: 2016: 8), poor learner performance has been chiefly attributed to learners falling behind on curriculum coverage in schools.

The coverage of the content varies from school to school and teacher to teacher depending on a number of factors. Schmidt and McKnight (2012) found that variance in content coverage can be attributed to district curriculum standards , textbook adoptions and the subject-matter knowledge of educators. The standards of curriculum coverage are sometimes set and maintained by the districts. Some districts set and maintain high standards, whereas others do not. Schools are given the options with the selection of textbooks, and therefore schools use different textbooks books to cover the same content and teachers with poor content knowledge do not do justice to curriculum coverage. The authors also discuss other factors, such as what topics teachers choose to cover and the amount of instructional time teachers allocate to these topics. The decisions of what to teach, when and how, are important decisions that compromise the child's future and should not be arbitrarily made. In order to teach, there is a need to have a list of topics on a subject in the curriculum (Ibid.). Educators must ensure that these are taught to learners and completed for the year. This alone however is insufficient to ensure learner achievement. Arora (2010: 5) argues for the provision of continued training to educators to ensure their profiency in teaching the topics in the curriculum. This view is supported by Spillane (1999:144) in his contention that teachers' "enactment of the reform" in other words their implementation of the reform, is influenced by the opportunities that they receive to "learn about revising their practice".

Aspects such as monitoring, classroom management, well-structured lessons, clear presentations and meaningful feedback have a positive effect on learner performance, but the educator's provision of learning opportunities must be used by students to be effective, aver (Klieme & Vieluf, 2009: 89). Teacher absenteeism and insufficient time spent by teachers on class tasks have also been identified as contributors to the low levels of curriculum coverage in schools in Limpopo province (Limpopo DoE, 2011: 4-5).

The JiP envisages uniformity amongst educators across different schools in the King Cetshwayo and Pinetown Districts, concerning content covered and methodology in order to improve learning outcomes. Educators are receiving development and support is mathematics, English First Additional Language and isiZulu Home Language through the JiP. Educators who teach these subjects have been equipped with a tool kit comprising of a curriculum tracker, a teacher's guide with content delivery methodology for each lesson, assessments and exemplars (Mabaso, 2016; Mlambo, 2014; Metcalfe, 2017). By following the tracker, educators across the districts of KZN implementing the JiP, teaching Grade 6 mathematics, for example, will be teaching the same content at the same time. This ensures some degree of uniformity and reduces discrepancies. Step

by step guidelines on how to teach each section are provided to support educators cover the content.

In respect of textbook adoption, which is also a factor leading to variance in curriculum coverage, the tracker allows the use of three prescribed books and educators are directed to relevant pages in these. Educators are also provided with corresponding references in the workbooks. The provision of these clear guidelines not only builds the confidence of educators in the delivery of the curriculum, but also makes their administrative tasks less challenging.

Metcalfe (2014) points out how curriculum coverage will significantly improve and sustain reading outcomes, which is summarised in the table below.

Table 2.4: Curriculum Coverage Improves Reading (Adapted from Metcalfe, 2014: 11)

READING OUTCOMES WILL IMPROVE SIGNIFICANTLY WHEN CURRICULUM COVERAGE IMPROVES	
Every Learner	Does more and better work because their teachers teach more of the curriculum better.
Every Teacher	Teaches more and better because they teach more systematically and confidently.
Every School	Functions well and improves curriculum coverage.
The District	Supports and serves schools in a way that is rated as helpful.

Monitoring is a process of gathering information on the overall status of the subject area in a school which will assist in decision making, future planning and development within the school. Monitoring, guiding, directing and supporting the core activities of the school are the core duties of the SMT (Witten, 2016: 3). Curriculum coverage is not simply the 'ticking off' of topics covered. The monitoring of coverage which is defined by what learners learn, is the main indicator of the performance of schools in the process of teaching and learning (instructional core). It is through the monitoring of curriculum coverage that SMTs can identify pedagogical problems with coverage and provide support to educators to solve these (Metcalfe, 2017: 38).

There are many reasons for monitoring the curriculum. The first involves efficiency to ensure that the educators are not ignoring the curriculum and thus wasting money spent on its implementation. The second is consistent development to ensure progression in curriculum

coverage from one grade to the next. Monitoring also keeps educators alert and on the task. By monitoring, a principal will become more visible and involved in the curriculum (Glatthorn & Jailall, 2009: 120-121). Supervision and teamwork are important aspects for curriculum coverage and curriculum management. Monitoring by the SMT and the district involves receiving and verifying reports for the sole purpose of providing support to educators. If these activities become endemic to the entire system, goal 18 of the DBE Action Plan, which is 'Ensure that learners cover all the topics and skills areas that they should cover within their current school year (DBE, 2015: 3), according to Metcalfe (2015: 38), will be monitored and evaluated effectively and provide knowledge regularly about the responsiveness of the system.

When supervising the curriculum, managers will deal with feelings and attitudes. People's resistance to change, however, makes supervision difficult (Buick, Blackman & Johnson, 2018; Reinders, 2018). HoDs and subject heads are furnished with curriculum monitoring tools which they are expected to use to monitor curriculum coverage and the state of their subject at their schools (Metcalfe, 2017). Templates for these are provided to the supervisors, but JiP is not prescriptive in the use of the tool. HoDs are permitted to adapt the tool according to the needs and context of the school.

The stages of curriculum monitoring use the framework of viewing of learner workbooks/exercise books; viewing the educator's portfolios (lesson preparation, annual teaching plan, tracker; assessment plan, assessments, diagnostic analysis and subject improvement plan) and classroom visits for lesson observation. After each of these activities, the HoD is required to hold a one-on-one meeting with an educator. HoDs are guided in this duty of reviewing curriculum coverage through the discussion of learners' work by the SMT training guides and the trackers which contain exemplars with cognitive levels for each term (Metcalfe, 2018). The number of times these are carried out per term is prescribed on the template but again this is open to adaptation by the SMT. In a study conducted on the management of the curriculum, HoDs and principals reported that the JiP had re-established accountability among stakeholders within the education system and the tools provided ensured evidence-based conversations took place between HoDs and educators. This resulted in transparency in the relationship between educators and supervisors (Buthelezi, Maphalala, Sibaya & Nzima, 2017).

2.2.6.4 Curriculum Management

Principals, together with their SMTs, as instructional leaders, are responsible for the management of the curriculum (Ndou, 2008) and to ensure that the curriculum is implemented and improved.

This implies being responsible for organising activities that support teaching and learning (DoE, 2008: 16). Being a successful instructional leader entails managing curriculum coverage, resources and time effectively (Van Der Berg, Taylor, Gustafsson, Spaull & Armstrong, 2011: 9); improving the school's educational programmes and developing learners (Eacott, 2008: 363); having direct involvement in instructional issues through the creation of a conducive and supportive context for teaching and learning, and by planning and implementing strategies for achieving learning outcomes (DoE, 2008: 17).

To improve the quality of education at schools, the SMT needs to collaborate to ensure that all activities around the curriculum are managed effectively. This is reiterated in the words of the Report for the National Planning Commission that "Effective schools require well selected individuals as principals together with management teams that understand and fulfil their roles as leaders of the curriculum, ensuring that an organised environment conducive to learning is present" (Van Der Berg *et al.*, 2011: 3).

There is an assumption that the role of curriculum management is the responsibility of HoDs. Research done by Hoadley, Christie, Jacklin and Ward (2008: 9) finds that this widely-held belief among South African principals was that the supervision of curriculum and teaching was not their main task but the responsibility of subject heads and HoDs. Recent trends, however, call for principals to become more involved in curriculum management. The principal, as the head of an innovative institution, that is prepared for and accepts change, has the mammoth task of leading the curriculum and possesses the attributes of a facilitator of change which include "concern for people shown in social and meaningful ways, organizational efficiency shown through trust in others, and strategic sense shown through vision and planning" (Cavanaugh *et al.*, 2014: 10).

Coleman, Graham-Jolly and Middlewood (2003) also discuss the important role of the principal in ensuring that the curriculum is managed effectively to improve the outcomes of the school. From their discussions at schools, they noted that the general feelings among the other stakeholders at school were that the principal should lead by example, improve the culture of the school, motivate learners and get to know the learners. Similarly, in a study conducted by Dayson (2016: 109) on the experiences of principals in curriculum management, it was established that the following actions are needed by principals in curriculum management: plan the curriculum properly to ensure quality curriculum delivery, increase the level of motivation of educators and learners for optimal performance, provide resources and plan in consultation with stakeholders.

School leadership has a major influence in achieving quality in education in a school. They need to have standards for what learners should be able to do and educators must be held accountable for their influence on learner achievement. Having these standards is not adequate and leaders need to attend to them daily as a planned learning activity (Elmore, in Fullan, 2001b). The aim of the JiP is to create a mutual "instructional culture of curriculum management of tracking, reflecting, reporting, monitoring and collaborative problem solving" (Metcalfe, 2014: 9).

2.2.7 Theories

Three theoretical perspectives informed the discussion in this section. Firstly, it is the consideration of theory of change which explains the process of educational change with a focus on implementation and institutionalisation. Secondly, the action theory focuses on premises that explain how change leaders' formation of a strategy of action is required for the successful implementation of change. Thirdly, the diffusion of innovation theory (DOI) draws attention to how the JiP is communicated and diffused through the schools. Knowledge of these theories provided insights into how change is adopted, implemented and diffused in schools.

The theoretical framework that informs the phenomenon of educational change has the following characteristics: 1) educational change is an organisational process taking place over a period of time; 2) the change process involves three broad phases namely- initiation, implementation and institutionalisation; 3) these phases are interactive and do not necessarily follow sequentially; 4) the process is more about adaptation of the innovation than direct replication, and 5) this conceptualisation of change has been utilised in the study of education change in the form of new programmes (Anderson, 2010: 71). Educators, as implementers of change, have, and still experience, difficulties in the implementation of educational change (Bailey, 2000; Booyse & Swanepoel, 2015; Richardson, 1998). It is therefore important to obtain, analyse and interpret their perspectives on the implementation of JiP. The implementation of change is important for the success or failure of educational change.

2.2.7.1 Constructivism

The acquisition of knowledge is explained through many philosophies, such as behaviourism, cognitism and constructivism. Constructivist thinking has been influenced by Piaget, Glasersfeld, Berger and Luckman, Fleck, Schütz and others (in Flick, 2004), and has many variations, but the main theme running throughout is that knowledge is a construct. The constructivist model is founded on the notion that individuals utilize the processes of "assimilation, accommodation and

equilibration" to organize their world according to their experiences (Haylock, 2007: 36). Schütz, as cited in Flick (2004: 89), asserts:

> *All our knowledge of the world, in common sense as well as in scientific thinking, involves constructs, i.e. a set of abstractions, generalizations, formalizations and idealizations, specific to the relevant level of thought organization.* (Flick, 2004: 89)

In essence, this statement captures the essence of constructivism that views learning as the "adaptive and self-organized construction of knowledge" that results from previous knowledge, experiences and socio-cultural activities (Doolittle, 2014: 490). This perspective reflects the complexity of learning, as it involves adaptation, self-organization, interaction, and history.

Individual constructivism, argues that the acquisition of knowledge is a mental process, whereas social constructivism, advocates that knowledge is constructed within sociocultural, historical and institutional contexts (Rodriguez & Berryman, 2002: 1020). Vygotsky's (in Haylock, 2007: 36) theoretical framework focuses on the fundamental role of social interaction in the development of cognition and on the idea that the ability to develop cognition depends upon the "zone of proximal development". The implication is that children can expand their knowledge and skills more effectively through supportive guidance by adults and collaboration with their peers, than by themselves. The importance of the educator as a facilitator of learning experiences, seen within this perspective, cannot be overemphasized.

Based on the constructivist principle, the school, as an organization, is viewed as a living, human construction. Education, in Patil's view (2012: 206), has been recognised as a "major agency of socialization", whereas educators and educational institutions are viewed as "socializing agents". Being a school leader, or even a teacher, according to this principle, implies acknowledging and understanding an organization, as a human construction, is ever changing (Orr & Cleveland-Innes, 2015: 236).

According to Flick (2004), knowledge is associated with how people organize their experiential world. An example of this would be the educators attending the developmental workshops provided by the JiP, who construct knowledge on the curriculum tracking and delivery through interactions and experiences with each other and the social environment. This knowledge is expanded through verbal interactions with other educators and also through their experiences with the implementation of the programme. This perspective considers the change agents within the context of the school (educators and managers), constructing knowledge on the phenomenon of

the JiP, through their experiences with each other (at subject, phase, staff and one-on-one meetings) and with the use of the programme itself. The many variations and perspectives on constructivism demonstrate its multidimensional complex and often contested nature.

2.2.7.2 Theory of Change

For change efforts to succeed, there needs to be respect and mastery of a few important aspects of the process of change. Success can lead to renewed commitment, excitement, satisfaction and a sense of accomplishment (Fullan, 2007: 8). According to the theory of change, change occurs as a process over a period of time and is not a 'once off' event. Educators, managers and other stakeholders will not just change because a policy was sent to school or a date was set for implementation. Change is conceptualised as a process involving three broad phases: 1) initiation (mobilization); 2) implementation (initial use) these are the initial encounters of implementers in putting the idea or reform into practice, and 3) continuation (incorporation, or institutionalisation). The change process overlaps and are not linear - occurring in stages - although it occurs over a period of time (Ibid.: 65).

The success of each phase depends strongly on the phase prior to it. The time frames from initiation to institutionalisation may vary depending on the complexity of the change: moderately complex change takes from three to five years, while larger scale efforts can take five to ten years (Fullan, 2001: 52). The two-way arrows in the conceptual diagram (Figure 2.1) are indicative of the interactive relationship between actions in each of the phases. Actions and decisions taken in one phase may "feedback" into and have repercussions for the phase prior to it (Anderson, 2010).

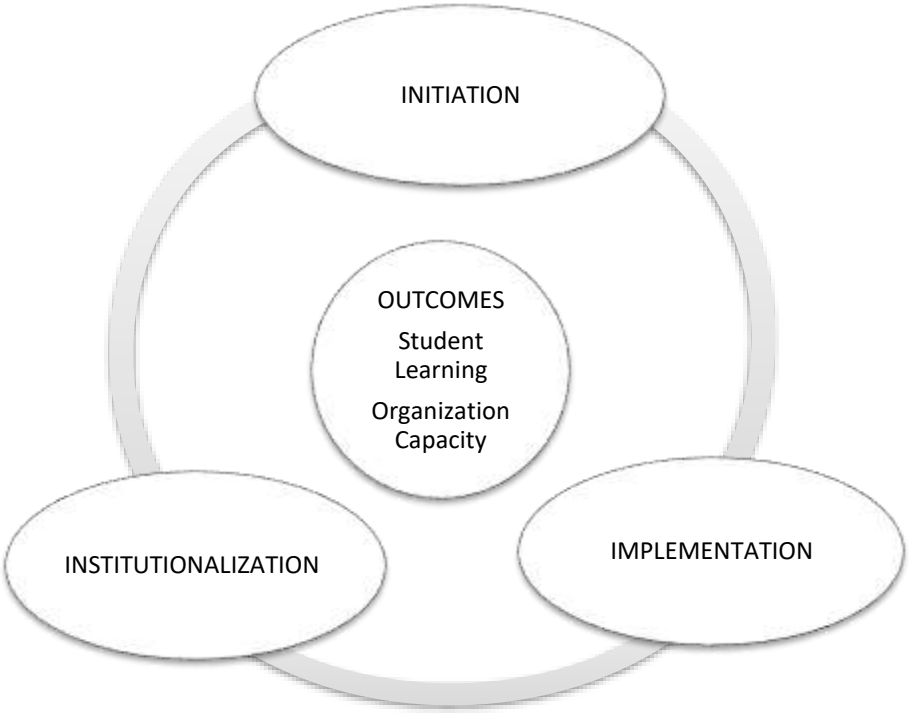

Figure 2.1: Overview of the Change Process (Fullan, 2007: 66)

The change process begins with the initiation phase. During this period, innovations are promoted and piloted followed by implementation of the innovation in schools. Continued use of the innovation will, after a period of time, result in the final stage of institutionalisation. Procedures and infrastructure are put in place which moves the innovation from an experiment to a routine (Sembiring, Hoogland & van den Hoven, 2016: 5). These three stages are further expounded.

Innovation or change starts with the initiation phase during which a decision is made to adopt an innovation and build commitment for the process. It is the process leading up to, and including, the decision to proceed with implementation. Innovations may be initiated from different sources and for a variety of reasons. A single authority or a collaborative mandate for one or several reasons can advance the necessity for change. In the context of this study, the Jika iMfundo Programme was initiated by the KZN Department of Education, in collaboration with the National Education Trust, in response to the poor performance of learners in mathematics, science and the languages (Mabaso, 2016; Metcalfe, 2017; Witten, 2016).

The fundamental activities in the initiation phase are the decision to adopt the change, and an assessment of the school's existing state in respect of the particular change. The decision taken by the KZN DOE to adopt this change was brought on by the poor performance of South African learners as discussed in 1.1.

Miles (in Hopkins, 2003: 39) analysed the various phases of school improvement and proposed some considerations that will lead to successful initiation of change:

> *The innovation should be tied to a* local agenda *and high profile* local need; *a clear,* well-structured approach *to change; an active* advocate *or champion who understands the innovation and supports it;* active initiation *to start the innovation (top-down is OK under certain conditions) and good* quality *innovation.*

Basically, Miles (in Hopkins, 2003: 39) is emphasizing the importance of the change in addressing an urgent need within the school or education system. The manner in which the change is structured and packaged, there must be people who support and champion the change, and the quality of the change must be of a high standard to really make a difference. According to Dalin (2005:32), many innovations fail because they are not representative of the needs of learners and teachers. He goes on to argue that these innovations must address real needs in schools or have a positive effect on classroom practice. The decision therefore to adopt an innovation will depend on its relevance and positive impact, as pointed out by Dalin (2005) and Miles (in Hopkins, 2003: 39).

To Fullan and Stiegelbauer (1991: 9), implementation involves the actual use of an innovation in everyday life. It involves a "change in practice" (Fullan, 2007: 30). With the implementation of the JiP this means changes to the routines of educators and managers at schools with regards to curriculum coverage. It is during this phase that the complexity of change begins to surface when questions are asked concerning which aspects of practice are to be altered (Ibid.). During implementation, schools will experience implementation dips as they move forward (Fullan, 2001). This refers to a decrease in performance and confidence as people encounter an innovation that requires new aptitudes and new insights. Change management is therefore important to ensure that people are supported during this phase. Skogan *et al.* (2000: 2) aver that the factor, most closely associated with successful programme implementation, is effective leadership. So in order to implement the Jika iMfundo Programme successfully, the school leadership, as change leaders, as well as implementers, need to assess the changes advocated by the programme; communicate these clearly and early to the educators; get educators to commit to the change willingly; have time frames for implementation; monitor progress; provide ongoing support and motivation, and provide onsite training (Skogan *et al*., 2000; Fullan, 2001b).

Fullan (in Vandeyar, 2017: 376) maintains that the implementation of educational change encompasses a "change in practice" in three areas for a successful outcome: 1) the probable use

of material that is new or has been revised which is inclusive of teaching resources such as "curriculum material and new technologies"; 2) the potential use of new approaches in teaching, and 3) the probable "alteration of beliefs, such as the pedagogical assumptions and theories underlying new policies or programmes". The implementation phase of change is the real testing ground of any intervention (Khosa, 2013: 8) and researchers concur that building the capacity of implementers to implement these changes is an important aspect that would influence successful implementation (Eze, 2015; Fullan, 2006; Renato & Massimo, 2014; Stoll, 2010).

Robbins (in Tearle, 2004: 334) points out that during the implementation, the attitudes and beliefs of people within an organisation is crucial as their resistance to change can negatively affect the process while their acceptance can be an impetus for change. The people in the organisation are ultimately the ones who must alter how they work for change to be successful. Many may be satisfied and comfortable with the status quo and when a change disrupts their way of doing things, they become upset, sceptical or cynical (Wagner, 2001: 5). They do not want to relearn or modify the way they work or teach or carry out administrative tasks.

Khosa (2013: 8) puts forward some requirements for successful implementation of change, such as the importance of standardised project inputs such as materials, resources and human resources; having a communication strategy to disseminate the vision and plans of the project, as well as the lessons learned from implementation, and the maintenance of high levels of accountability by all stakeholders. The implementation of change needs to be properly planned and monitored and there needs to be a shift from the plan to the actual progress, problems and concerns that may arise. This will ensure that resources are directed to areas that need them and may lead to amendments to the original plan and support system (Fullan, 1989: 17).

While institutionalisation is the goal of any innovation, changes may be abandoned at any given time for any number of reasons as postulated by Anderson (2010: 76): if the funding and resources required for the programme are discontinued; there is evidence or perceptions that point to the innovation being ineffective; lack of adequate pressure and support from leadership; people having to spend their energy and time on too many other important issues at the same time and staff turnover. Change researchers and theorists have also identified several conditions within organizations and practices of managers, and the characteristics of the innovation that influence the possibility of a specific change, being sustained or not. Some efforts to change do result in what systems and complexity theorists refer to as a "change in state" where the changes within organisations and in individuals develop into routines are not mere "passing perturbations" in how

people work (Anderson, 2010: 76). The idea of change in state (rather than stages or phases of change) makes sense, albeit it has its own conceptual and empirical problems: since change is multidimensional, some aspects of the change may be sustained and institutionalised as a part of practice, whereas others may not. Since the school and school systems are loosely coupled as organisations, a change that affects multiple settings like the classroom or school or district or contexts might be sustained in some settings and not in others and the magnitude of change and the impact it has on how educators worked previously (Ibid.).

Anderson (2010) also makes a distinctions between change that defines existing practice, replaces existing practice; adds new practices to existing patterns of work. The latter is appropriate to the implementation of the JiP as the programme focuses on improving how the curriculum is covered. To determine whether a change has been institutionalised, it would have to be assessed a few years after the implementation phase (Ibid.).

There are certain conditions that are required for institutionalisation to be achieved. Baglibel, Samanciogluet and Crow (2018: 2) identified five key variables and principles that are required to achieve the success and institutionalisation of any change initiative are: employee commitment and motivation, supportive leadership, sufficient infrastructure and resources, provision of ongoing professional development opportunities and Reflection on the past experiences and the values of the organisation.

Anderson (2010: 72) highlights the conditions and activities for each phase of the change process that need proper attention for the successful implementation of change. To complement this, Morrison's (1998: 143) "inhibiting" and "facilitating" factors present conditions that need to be avoided or enforced so that each phase progresses successfully, leading to the ultimate goal which is institutionalisation of change.

The table below provides a summary of the change theory with a focus on the three phases of change, the actions which are essential at each phase, and the inhibiting and facilitating factors for each of the phases.

Table 2.5: Summary of the Three Phases of the Change Theory (Adapted from Anderson, 2010; Morrison, 1998)

PHASE	ACTION	INHIBITING FACTORS	FACILITATING FACTORS
Initiation	High-profile need; clear model of the change process; strong advocate; active initiation.	Lack of clarity of the meaning and reason for change; change is imposed, lack of support; limited resources; senior leadership is obstructive to change and change is not an improvement.	Clear and well-structured approach to change; voluntary participation; common values and concerns; availability of resources; change seen as an improvement; ownership of change; active initiation and advocacy; change contributes to ongoing improvement.
Implementation	Orchestration; shared control; pressure and support; technical assistance; rewards.	Conflict and power struggles; lack of a vision; lack of motivation and provision of early incentives; lack of monitoring; inertia; opposition from senior staff.	There's early success with the change; meets the needs; open channels of communication; incentives are provided; peer interaction and support; integration of top-down and bottom-up strategies; external support.
Institutionalization	Embedding; links to instruction; widespread use; removal of competing priorities; continuing assistance/support	Lack of interest, support, funds; limited capacity for sustained continuous change; change in behaviour and values is not sustained; no ownership of change; apathy; departure of senior staff and leaders.	Change is institutionalised and becomes a part of the culture of the organisation; there is interest in the fundamental change; clear direction of change; people take ownership of the change; resources are available; adequate support from facilitators and trainers; elimination of contradicting and competing practices.

2.2.7.3 Theory of Action for Effective Implementation of Change

The theory of action helps explain actual situations of success, and when these are used intentionally, it is expected to result in similar success in most cases (Fullan, 2006). The choice of

this theory is used to underpin explanations of the actions or behaviours that are required by change leaders (principals) for the successful implementation of change.

Good leaders, according to Fullan, are "thoughtful managers who use their theory of action (such as the six secrets: 1. Love your employees, 2. Connect peers with purpose, 3. Capacity building prevails, 4. Learning is the work, 5. Transparency rules, and 6. Systems learn)" to dictate their present behaviour, while being amenable to new possibilities or information that regulate further actions (Fullan, 2008: 8).

The point of reference of all terms in the theory of action identified by Parsons *et al.* (2001: 4) is the action of the individual. The interest of the theory of action is not directed by the internal physiological processes of the organism but to the organisation of individuals' orientations to a situation.

There are seven core underlying premises that underpin Fullan's theory of action which can lead to concrete strategies and actions: "a focus on motivation; capacity building, with a focus on results, learning in context, changing context, a bias for reflective action and tri-level engagement" (Fullan, 2006: 6). are considered to be essentail aspects for thesuccessful implementation of the JiP.

Motivation

According to Fullan, (2006: 6) for improvement to be possible, people should be motivated to work as individuals and collectively. Some of the key components of motivation are "moral purpose; capacity; resources; peer and leadership support; and identity", and when used together in a strategy, they will make a motivational difference. Carnall, cited in Morrison (1998:130), argues that the motivation structure that people adopt will depend on their beliefs of human nature. If people are viewed as "rational economic", then they are primarily motivated by financial incentives and people who are viewed as "essentially social", are motivated by the need to realise their own identities through interpersonal relationships, such as the need for acceptance (Morrison, 1998:130).

Dominant theories on staff motivation focus on the role of managers and other key actors supportive of change (Li, 2013: 149). Responsibility for vision building and the formulating of change coalition has to be the concern of managers and change advocates (Ibid.). Employers and managers need to endeavour to motivate their staff to participate in the change process. There are two main methods for motivating staff. Economic motivation refers to the staff members' "natural

impetus" such as salary and promotion opportunity. The other method is the cognitive method, which is primarily concerned with staff development programmes (Li, 2013: 149), such as team building activities. Malone (2012: 1) argues that if research on change is taken at a superficial level, then one might have to conclude that the first step is to develop a shared vision and then implement it, but in fact the reverse causal sequence is more effective. This means that by helping people accomplish success in the first place their moral purpose is deepened.

Capacity Building

Capacity building concerns improving the effectiveness of individuals and more especially organisations (Eze, 2015; Fullan, 2006; Renato & Massimo, 2014). It is a process that raises the ability of individuals to optimally carry out their duties, and involves shaping behaviours and attitudes, conveying knowledge and improving skills, while "maximizing the benefits of participation, knowledge exchange and ownership" (Eze, 2015). Capacity building is also viewed as a strategy to "raise the bar and close the gap of student learning" increasing the effectiveness of the group through the development of individual and group knowledge and competencies, resources and motivation (Fullan, 2006: 9). Renato and Massimo (2014: 1) concur that it is a "process of assisting an individual or group to gain insights, knowledge and experiences needed to solve problems and implement change".

In as much as the importance of capacity building is widely recognized, increased attention needs to be given to identifying and implementing effective capacity building methods (UNEP, 2006). Fullan (2006: 2) concurs with this view when he states, "the ultimate goal of capacity building is to sustain a process of individual and organizational change and to enable organizations, groups and individuals to achieve their development objectives". This involves the development of knowledge and capabilities, resources and motivation of the people within the organisation. An important feature of the theory of action is the notion that change will amount to nothing if the capacity of individuals is not developed (Ibid.: 9). Developing the capacity of educators will in fact motivate them. Capacity building, which focuses on results, implies building internal accountability.

The theory suggests that by focusing solely on accountability, negative pressure, which does not motivate, is brought to bear on educators. Positive pressure is intrinsic. The pressure motivates educators because it is fair and reasonable, builds capacity and provides resources. A greater investment in capacity building, increases the right one has to expect improvement in performance. Capacity building should therefore precede the judgement because it is motivating (Fullan, 2006).

This implies that before teachers are judged on their abilities to cover the curriculum adequately, they should be provided with opportunities to improve their capacity as teachers.

The quality of teachers is an important factor in student learning and therefore necessitates the continuous improvement of the skills of educators. For the purposes of this study, the focus of the JiP was on developing the capacity of educators and the entire school as a requirement for improving the quality of education (Metcalfe, 2017). Overall, the capacity of educators refers to their ability to deliver the curriculum efficaciously and then leading to optimal learner achievement (Chukwu, 2009: 9). Educator capacity can be developed through formal training at educational institutions or through in-service training (Ibid.). In order for any innovation or education transformation to be implemented effectively, educators' capacity needs to be developed. The normal trend during these innovation processes is for the education department officials to educate the change agents on the intended change at workshops. This continuous training for educators can directly impact student achievement (Nzoka & Orodho, 2014: 88).

There are different levels of capacity from individual to groups, within an organization and to an organization as a whole. Successful change depends on the capacity of individuals (educators), as well as the organisation (school) (Stoll, 2010). Policy developers need to assess where and what type of capacity building needs to take place. Research has shown that capacity building is critical to sustain change but more should be done to identify and implement capacity building processes (UNEP, 2006). UNEP (2006), put forward certain strategies that will enhance the efficacy of capacity building, if they are employed by policy makers and national departments. First and foremost a needs assessment must be carried out to identify the areas that need development. Already existing capacity must be identified before determining new areas to be developed. One needs to be clear about the objectives of the programme by asking the following questions: What are the reasons for the programme? Who are the beneficiaries? What are the areas to be covered? These are some of the questions that the policy makers and beneficiaries need to answer. A wide range of capacity building approaches such as training, formal education, capacity building projects, and networking must be utilized to build capacities. The selected approach is dependent on the goals that the policy makers wish to achieve. The argument is that watching a power point presentation at a workshop is not adequate to develop people's knowledge and skills. The target group for the activities needs to be selected properly so as to build a vital group to sustain change. Target people in capacity building activities, in the area of education that would refer to the educators. Often, already educated and senior officials receive training due to budgetary constraints. The way in which capacity building programmes are approached needs to be changed

if the masses are to be reached for sustainable change. Developers of change need to make the training-of-trainers approach work. Since policy makers cannot train every single individual themselves, the training-of-trainers approach is when a group of professionals first receive the training, and they can then go out and train others. Capacity building programmes must be institutionalized in regions and districts, instead of the national departments conducting capacity building programmes. This would increase the effectiveness of the programme and cut down expenses.

The overarching aim of the JiP is to build the capacity of educators in the teaching of mathematics and the managers in curriculum management and districts in supporting schools in curriculum issues. One of the key concerns of this study was on determining the experiences of educators with the training provided to them in preparation for the implementation of the JiP. Attention was given to the effectiveness of these developmental opportunities in equipping the stakeholders at schools in the execution of their duties.

Learning in Context

According to the theory of action, strategies for improvement and reform must include opportunities for learning in context. Instructional reform necessitates a change in the existing "culture of administration and teaching in schools" (Draper, 2013: 1). These cultures will change when old behaviours are replaced with new learned behaviours. Effective learning can be achieved by participating in the learning environment so that learning takes on new meaning (Ibid.). The educator must be afforded every opportunity to actively engage in learning rather than just gain knowledge. Change leaders must not consider the learning activities separately from the context in which it is taking place. Elmore, cited in Fullan (2006: 9), emphasises that improvement occurs when people learn to do the 'right things' in their work settings. Effective schools, according to the Department of Education and Training (2005: 8) in Australia, are learning communities at which teachers collaborate and are collectively responsible for developing their teaching practices and improving student achievement. They argue that professional learning (development) is not a once of event - like at workshops – but should be a continuous activity in the school setting.

Changing Context

This premise states that the theory of action must have the potential to change the larger context, in order for success to occur (Fullan, 2006: 10). When the other premises such as building capacity and being motivated are incorporated into the bigger context, it will establish lateral capacity. This implies that schools and districts will learn from each other, and in so doing unleash more

knowledge and motivation which are referred to as change forces (Ibid.). Principals can form networks with other schools with the intention of not only improving their schools but other schools as well.

This premise also focuses on the negative issue of dealing with distractors, which may be collective negotiations; disputes and strikes; unnecessary bureaucracy, and acquiring effective ways to deal with management issues. These distractors are in preference of the 'status quo' and redirect energy away from continuous improvement, to maintenance activities (Fullan, 2006: 10).

Bias for Reflective Action

Reflective action involves quick and intelligent thinking. It is not important what people learn in doing but what they learn by pondering over what they are doing (Fullan, 2006: 10). The theory of action suggests that people learn best through a cycle of action, reflection, inquiry, evidence, and so on. Bias for reflective action fuels the previous four components to move forward (Ibid.). An aspect of reflective action is that shared vision and ownership is not a requirement for the process but an outcome. The second aspect of reflective action is that behaviour changes, to an extent, before beliefs. This implies that people may change their ways of doing things without changing their thinking on the change itself. The third aspect is that action should receive more attention than planning. Reeves (in Fullan, 2006: 10) articulates that the appearance and proportions of the planning document have no relation to the quantity and quality of action and student learning. The importance of reflective action on the part of educators in the classroom, in practice, and managers in the management of the change, is emphasised by the JiP. There is a need for reflection to result in strategic actions from these stakeholders if the JiP is to be successfully implemented at schools.

Tri-level Engagement

The theory of action calls for the formulation of strategies to incorporate processes that promote interaction and collaboration with the stakeholders at the three levels of the schools and community, the district and the state (Fullan, 2006: 11). The Jika iMfundo Programme calls for collaboration between the stakeholders within the school and between the district and the school to ensure the success of the programme (Metcalfe, 2017). Principals need to form relationships with the community, other schools and the different levels of the DoE. Fullan (2016: 1) refers to this as 'permeable connectivity', which involves "more two-way interaction, communication and mutual influence". These connections may lead to opportunities for sharing, support and engagement on the JiP.

Persistence and Flexibility in Staying the Course

Change is complex and not an easy endeavour. Many people might want to give up. Firm determination is required to keep going. The theory of action calls for resilience, which implies persistence and flexibility. Persistence means persevering in the face of adversity and barriers. In contrast, flexibility is the ability to adapt and change. It is the absence of intransigence of thinking and the presence of self-improvement and modification (Fullan, 2006: 11). The successful implementation of the JiP will require educators and managers to be prepared to modify the way in which they manage the curriculum, be willing to put away all scepticism and cynicism and resolve to persist in spite of the challenges.

2.2.7.4 Diffusion of Innovation

Classic theories such as the diffusion of innovation theory (DOI), unlike frameworks and models, are considered passive as they have no intention of actually bringing about change but simply describe the change mechanism and explain how the change occurs (Nilsen, 2015). In other words, frameworks and models are devised after practice, and provide strategies for achieving change. When these are followed, they should result in successful change. The DOI was chosen because it can be used to explain the innovation, which in this case is the JiP, and how the JiP was diffused in the system of the school.

According to the DOI, first developed by Everett Rogers in 1962, "An *innovation* is an idea, practice, or project that is perceived as new by an individual or other unit of adoption" (Sahin, 2006: 14). The DOI theory is appropriate for comprehending the adoption of innovations or programmes in educational institutions as it focuses not solely on the "decision-makers or social structures" but accentuates innovation as a means of achieving change in behaviour (Morris, Marzano, Dandy & O` Brien, 2012: 13). Within the context of the study, the DOI is used to draw attention to the JiP as an innovation that seeks to bring about changes in the way in which educators cover the curriculum and in the management of the curriculum by the SMT.

Diffusion is defined as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1983:6) or as "companywide acceptance of an innovative idea, and implementation, sets up everything needed to develop and utilize or produce the innovation" (Neese, 2015: 4). The DOI predicts that media, as well as interpersonal contacts (communication channels), provide information and influence opinion and judgment of the individual to accept or decline an innovation.

Wilson (2015:1) postulates five steps in the diffusion of innovation process that people use to assess how the change affects their work and lives: the knowledge step; formation of favourable or unfavourable mind-sets; decision to adopt or reject; implementation and evaluation. During the knowledge step, individuals are enlightened on the innovation and become knowledgeable about the reasons for/functions of the innovation. The question of how educators and managers received information about the JiP is linked to this step. People then develop either a favourable or unfavourable mind-set about this change, depending on the information that is communicated to them about the innovation. According to Fullan, "the crux of change is how individuals come to grips with this reality" (2007: 20). A decision to either adopt or reject the innovation, is made. A favourable attitude, will lead people to adopt the innovation. An unfavourable attitude will lead to rejection. When individuals make a conscious decision to adopt the innovation that overcomes their fears and uncertainties about the innovation (Pennings, 2012: 1) it leads to the next step which is implementation. They implement the new idea and make the necessary behaviour changes that are required by innovation. In the implementation of the JiP, educators are required to cover the mathematics curriculum adequately so as to improve the learning outcomes. Improved learning outcomes necessitate the effective management of the curriculum by managers. It is important to understand how educators and managers perceive their roles and whether they are actively engaged in these if we have to understand the implementation of the JiP. In the fifth step, people verify their choice by evaluating the results of the implementation. This involves reflection. In order to improve the implementation of the JiP at schools, principals need to have regular meetings at which they reflect on the change process. This calls for an analysis of both challenges and best practices. The study on the whole, concerns peoples reflection on their experiences and whether they consider the JiP to be effective in improving curriculum coverage.

The diffusion of new ideas comprises of four elements (Rogers, 1983: 16), which determine how people use the innovation.

The *element of the innovation* refers to new ideas, technology, and new curriculum. It does not necessarily have to be new. It can be an adjustment or revision of the previous contexts. The following features or characteristics of the innovation determine its rate of adoption (Ibid.): Relative advantage refers to the benefits or advantages of the innovation. It "measures how improved an innovation is over a competing option or the previous generation of a product. Potential users need to see how an innovation improves their current situation" (Yocco, 2015: 3). Do educators and managers view the new idea/innovation or new ways of doing things, to be better than the preceding one or their old practices? Compatibility checks if the innovation is in line with

the prevailing beliefs, previous experiences and needs of the adopters; complexity refers to the to the extent to which the innovation is challenging to use/implement. Individuals or organisations will more likely adopt an uncomplicated innovation, than a complex one. Triability looks at whether the adopters are able to test the innovation in a limited time and finally the element of observability determines if people within the social system are able to observe the effects of the implementation of the innovation, which may be positive or negative. Educators and managers views on JiP will be informed by the features of the JiP, whether it is benefical, easy to use, compatable with the CAPS curriculum, can they observe its effects and whether they are given time to try it out and make inputs on its development.

The element of the *communication channels*, is the way in which information is communicated to individuals or between individuals within an organisation concerning the innovation. Diffusion occurs when information about the innovation is shared through various channels, like the media or individuals, to potential adopters or implementers, in order come to an agreement on the innovation. Dearing (2010: 2) refers to this as dissemination science. Mass media channels, like radios, newspaper, television, and internet, allow information to be communicated quickly and efficiently. Information may also be transmitted to individuals via interpersonal contact. All people in the social system do not adopt the innovation simultaneously. Variables, such as the internet and the views of opinion leaders (frequent users and problem solvers) (Ibid.:12), will influence the decision to adopt or reject. The question of how educators and managers in the study were prepared for the implementation of the JiP is also linked to how the information on the JiP was communicated to them.

The whole diffusion process involves the element of *time* (Rogers, 1983: 16). People adopt the innovation to different degrees. They range from the innovators and early adopters to the laggards who do not adopt the change. Change agents target the early adopters, who are considered to be opinion leaders, to convey the message about the innovation. The decision-making process takes time; the rate of adoption (speed) is measured by the number of people that adopt change in a given period of time. With the selection of the multi-case study, the researcher conducts a comparison of how different participants, within a site and across sites, experience the innovation. This will elucidate the rate of the diffusion of the JiP at the three sites.

The *social system* which represents a group of people within which the change is taking place may refer to individuals, informal groups, organisations. In this study, the social system is the school. Change leaders must know the characteristics of the target group to whom they are promoting an innovation as these characteristics will help or hinder the adoption of the innovation (LaMorte,

2016: 3-4). Plans for diffusion must consider how people essentially acquire knowledge and modify their behaviour in social groups and organisations (Bentley, 2010: 41,42). These include imitation (people adopt new behaviours that they observe others modelling successfully); iteration (innovations are developed, enhanced and entrenched through repetitions) and improvisation (when confronted by new and unfamiliar situations, people tend to do whatever is necessary). They would try things they would not have before; inspiration (positive responses to change can be elicited through the compelling narration of stories of why change is needed rather than through instructions, injunctions or abstract descriptions); immigration (repositioning people into new locations, instead of moving ideas independently of the people who carry them out, is more effective in implementing new practices); interpretation (recognising patterns and making inferences from complex information are crucial to the successful evaluation and adoption of innovations over time) (Ibid.).

In investigating the implementation of the JiP, the importance of how the innovation was diffused through the schools is explained. The focus is on four elements: 1) the features of the JiP and whether it is beneficial to teaching and learning; 2) how the information about the innovation is communicated to schools; 3) how change managers were able to persuade the educators to adopt and implement the innovation, and 4) the actions that are required by educators and managers in implementing the JiP.

2.3 SUMMARY

The review of literature provided pertinent information on the issues that are related to the implementation of the Jika iMfundo Programme at primary schools in the King Cetshwayo District of KZN. A background into the context of curriculum change revealed that while educational change is a necessary ongoing trend worldwide, it has many implications for leaders and implementers at the school level. Governments often attempt to bring about social and economic reform through education. Furthermore, innovations are also introduced to improve the quality of teaching and learning. The studies of Chisholm (2000); Jansen and Taylor (2003); Kallaway (1984), and Weber (2008) are examples that show that although the actions of the South African government concerning curriculum change were well intentioned; various issues, concerns, problems and challenges undermine implementation. One of the main problems is the continued poor performance of learners in South African schools and this has led to the national DBE

introducing different strategies in the underperforming schools in various provinces to improve learner performance (Cavanaugh *et al.*, 2014; Cembi, 2006; DBE, 2015; Motala, 2005).

The JiP has been implemented to improve learner performance through curriculum coverage (DBE, 2015; Morobe, 2014; Metcalfe, 2014). Therefore, the management of the curriculum by the SMT together with the improvement of educators' curriculum delivery skills through the provision of training and resources is also a focus of the programme (South African Government, 2015, Metcalfe, 2017). The importance of curriculum coverage for improved learner performance has been highlighted in many studies (Arora, 2010; Chen & Hsieh, 2008; Metcalfe, 2014; Schmidt and McKnight, 2012). The task of school management is to ensure that the curriculum is covered adequately. The role of the HoD in curriculum management is to supervise the work of educators and learners and report to the senior managers on the state of curriculum coverage. Educators need to prepare well, understand the content and present the lessons using a variety of resources and methods.

Theories of changes and the DOI theory explain how change is implemented and communicated at schools to ensure educator acceptance and use of the JiP. Although the literature reveals that a number of challenges can materialize when successfully implementing and evaluating innovations, such as poor planning, lack of proper capacity building programmes for individuals and organisations, inadequate support from the change leaders and policy makers, few have focused on providing strategies to overcome them.

Informing both the programme evaluation and practice research, this study describes positive and negative experiences in the implementation of the curriculum management programme (JiP) based in the King Cetshwayo district of KZN. This study will address gaps in the knowledge of the JiP by describing the programme, outlining both the challenges and successes in implementing the programme and presenting strategies for managing its implementation. The role of change leaders in the management of change cannot be overemphasised. (. Studies support the assertion that leaders need to communicate changes, motivate and support educators, in order to achieve successful implementation, and to sustain a change (CLF, 1999; Glatthorn & Jailall, 2009; Clare, 2014; Education, 2000a). Furthermore, continued communication, capacity building, developmental support and provision of adequate resources is needed for the diffusion of the innovation of the JiP in schools in the King Cetshwayo District. This study is therefore considered important and appropriate at this time, as it will bring to the fore the effectiveness of the JiP by

focusing on the experiences of educators and managers with the training, resources and support provided by the programme.

Chapter three will elucidate the research design and methodology employed to elicit data to answer the key and sub-research questions.

CHAPTER 3

RESEARCH METHODOLOGY AND DESIGN

3.1 INTRODUCTION

Chapter two considered educational change within the parameters of the conceptual framework with the emphasis on the process and implementation of curriculum change and implementation. The focus of this chapter is on providing a detailed description of the philosophical assumptions also referred to as worldviews or paradigms, that are influential in the selection of the research question, research design and methodology that underpin the study; the research design and methodology employed in investigating the aims and objectives of this study and in exploring the set research questions. As stated in chapter 1, the aim of the study is to explore the experiences of managers and educators with the implementation of the Jika iMfundo Programme at primary schools, in the King Cetshwayo district of KwaZulu-Natal (KZN). The philosophical position adopted for the study, the choice of the qualitative design over the quantitative is justified in this chapter while the research site and sample, as well as data gathering and data analysis methods are described and justified in the context of the study. Measures to ensure trustworthiness and ethics in the study are also explained.

3.2 THE RESEARCH PARADIGM

Researchers have to make a number of critical decisions when designing their research and one of these is the choice of a paradigm. The term “paradigm” comes from the Greek word paradeigma which means pattern. Kuhn (Kuhn 1996: x) in his attempts to uncover the source of the differences and controversies between the natural sciences and the social sciences, was led to accept the important role of paradigms in scientific research. He used the concept to denote “universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners” (Kuhn 1996: x).

Guba and Lincoln (1989:80; 2005:183) conceptualise a paradigm as a set of beliefs or assumptions made by the researcher that guide their activities/actions. This definition is shared by Johnson and Christensen (2010: 31), who demarcate the paradigm as a perspective on research or an approach

to how research is conceived and conducted, by a community of researchers, which is "based on shared assumptions, concepts, value and practice". A paradigm encompasses four aspects: axiology, epistemology, ontology and methodology (Denzin & Lincoln, 2005). Each of these aspects or dimensions deals with particular assumptions of the world, reality and knowledge but combined, they furnish insights about the world (Pasque & Lechuga, 2016).

Ontology is concerned with the researcher's assumption of the nature of reality, which the researcher brings to bear on his/her work. Epistemology deals with the nature of knowledge and the relationship between the knowledge and the knower, which researchers claim for their work. Methodology is how the researcher approaches a research problem and axiology deals with ethical issues – the actions of the researcher (Lincoln & Guba, 2013; Pasque & Lechuga, 2016). It is important for researchers to know what paradigm they operate from as this would have consequences for how data collection tools are used and how the research is designed (Guba and Lincoln, 1989:80).

The paradigms, according to Maxwell and Wooffitt (2005:36), encompass research methodologies related to these assumptions. They go on to identify two levels of paradigms: abstract or general, and specific. At the abstract and general level are worldviews such as positivism, constructivism, realism and pragmatism and more specifically, paradigms that are relevant to qualitative research are interpretivism, feminism, post modernism and phenomenology (Ibid.).

On a more general/abstract level, the researcher chose the constructivist worldview as the goal of the study was to "rely as much as possible on the participants' views of the situation" (Creswell, 2014: 8). In the context of the study, the aim was to elicit the views of participants on their lived experiences with the implementation of the JiP. Constructivism is not aligned with positivism as positivists are not interested in phenomena that can be reduced and interpreted. They objectively describe, manipulate and control phenomena as theirs is the philosophical view that all knowledge must be verified through scientific methods such as experiments, observations and logical/mathematical proof: "All these scientific methods are able to provide empirical, observable and measurable evidence, which are subject to principles of logic and reasoning. Moreover, according to positivism, things that can be observed with five senses are the only 'real' concrete knowledge" (Hasa, 2020: 1).

Constructivists acknowledge that the researcher is an integral part of the study and not a bystander or a neutral observer and that the phenomena under investigation is always subject to interpretation. The assumption is that reality is constructed in particular contexts and in order to

research this reality, the researcher needs to interact with the researched (Klenke, 2008: 22). The author goes on to quote Guba and Lincoln, who designate the researcher has a "passionate participant" in the research process. Besides interacting with the researched, interpretations are made based on the researcher's beliefs and interpretations. Denzin and Lincoln (2008:31) argue that all research is interpretive, as it directed by the researcher's beliefs and perceptions of the world and how it should be studied. Therefore, on a more specific level, interpretivism is the paradigm of choice in this study.

Denicolo, Long, and Bradley-Cole (2016) delineate interpretivism as the approach of choice for constructivists since it seeks to understand the phenomenon under investigation from the perspective of the individuals in the study. Interpretative inquiry involves the researcher trying to capture the actions and efforts of people in making sense of their lived experiences (Morehouse, 2012:47).

This study follows a constructivist- interpretive paradigm, (Denzin & Lincoln, 2008: 31), which emphasises the multiplicity of realities, the creation of meaning on the phenomenon through the interaction of the researcher and the participant within the natural setting. In the context of this study the researcher is aware that not all participants share the same reality of the phenomenon of the Jika iMfundo Programme. Their experiences may not be the same. The researcher through the selection of "naturalist" methodological procedures of interviews, observations and analysis of artefacts and by interacting with the participants in the setting of the school, creates meaning of the Jika iMfundo Programme.

3.3 RESEARCH APPROACH

This study adopted a qualitative approach. The selection of the qualitative approach over the quantitative and mixed approaches by the researcher in conducting this study is in line with the constructivist worldview. The features and assumptions of the qualitative approach fall within this worldview. Maxwell (2013) asserts that quantitative and qualitative methods are not just different ways of doing the same thing, they are instead based on differing theories or world views. The author goes on to explicate that while quantitative researchers see the world in terms of variables and use statistical relationship between variables, qualitative research is based on the interconnectedness between "people, situations, events and the processes that connect these" (Ibid.: 29). This assertion is buttressed by Merriam's (1998: 6) observation that the key

philosophical assumption of qualitative research is that "reality is constructed by individuals interacting with their social worlds". Similarly, Starman (2013: 30) also draws attention to the interpretative paradigm that characterises qualitative research, which emphasises subjective experiences and the meanings they have for an individual.

For the researcher, qualitative research is an inquiry process of understanding phenomena that use "distinct methodological traditions of inquiry to that explore a social or human problem in a natural setting" (Creswell 1998: 15). In this regard, Merriam and Tisdell (2016: 23) point out that qualitative research is inductive, which means that the aim of data collection is the building of "concepts, hypotheses, or theories and not the deductive testing of hypotheses".

The qualitative researcher is interested in understanding how individuals interpret/make sense of the world they live in and the experiences that they have in it (Merriam, 1998: 6). Their explanations of the phenomenon are based on how some situations and events affect others. This research approach is appropriate as the explanations and descriptions of the JiP are constructed on the perceptions and experiences of educators and managers with its implementation. The researcher's task in this study was to look for the complexity of participants' views on the JiP and not narrow them down into specific categories (Creswell, 2014: 37). That means it does not simply analyse and describe but also explains and interprets the information, taking into account the context.

Qualitative research encompasses a variety of approaches and methods for the study of social issues. The data and information for a qualitative study that document the lived experience of the participants with a social phenomenon may be collected from interviews, observations, documents or artefacts, visual materials such as artefacts, photographs, video recordings, and Internet sites (Saldana, 2011: 3). The qualitative research was selected based on the following criteria as presented by Saldana:

> *The outcomes are most often composed of essential representations and presentations of salient findings from the analytic synthesis of data and can include: documentation of cultural observations, new insights and understandings about individual and social complexity, evaluation of the effectiveness of programs or policies, artistic renderings of human meanings, and/or the critique of existing social orders and the initiation of social justice* (Ibid.: 4).

As recommended by Yin (2010: 6), the five features of qualitative research were considered to be within the constructivist worldview that underpins the study. The suggestion of studying the

meaning of people's lives, under real-world conditions instead of attempting to come to a single definition of the concept; representing the views and perspectives of the people; covering the contextual conditions within which people live; contributing insights into existing or emerging concepts that may help to explain human social behaviour; and striving to use multiple sources of evidence rather than relying on a single source alone all fell within the ambit of the researcher's world view. In the context of the study this meant that the qualitative approach facilitated the study of the phenomenon of the JiP through the perspectives of educators and managers on their experiences with the implementation of the JiP; the observations and interviews were conducted under real-world conditions at the schools; the contextual factors that impacted their experiences were also considered. According to the interpretative perspective the researcher or any observer and the world are viewed as a part of an activity or practice in the "lived world" (Morehouse, 2012: np; Hancock,1998: 7)

3.4 RESEARCH DESIGN

A case study design was selected for this study. Yin (2003: 19) defines research design as an action plan for getting from "here to there", beginning with the research question and culminating with answers or conclusions. A design involves everything that is done during the research process from selecting a topic, conceptualizing a topic, choosing a strategy for data collection, collecting data, processing and analysing data, interpreting and making inferences about data and writing the final report (Gray *et al.*, 2007:. 35).

Creswell (2014: 12) views research design as the different types of inquiry within qualitative, quantitative, and mixed method approaches and which provides direction for procedures in a research.. A proponent of the qualitative research design Maxwell (2013) considers a design as a "do-it-yourself" rather than an "off- the-shelf" process; it is not a linear process which makes use of "fixed sequential steps from a predetermined starting point" but an interactive one "involving an interconnection among the various design elements". The process calls for regular evaluation and adjustments based on influences by the research context and goals of the study (Ibid.: 3).

The case study design which emerged as a research strategy in the early 20th century in the United States, is useful to interpretivists in conducting "in-depth examination of phenomena in their settings" (Bailey, 2010: 1). Constructivists view the case study report as the source of "vicarious experience", which is an "important mechanism for the transfer of knowledge from one setting to another" (Denzin & Lincoln,1998: 213).

The case study was selected as it is a study of phenomena in their natural settings (Yin, 2010: 17), which is consistent with the research paradigm and approach-constructivist interpretive paradigm underpinning this study.

Case study design can be defined as a design that is not "a sweeping statistical survey or comprehensive comparative inquiry" (Labaree, 2009: 2), but which "involves in-depth exploration of a specific bounded system" (Chmiliar, 2010: 583) and is a "valuable tool for conveying beliefs and feelings" (Mazumdar & Geis, 2015: 256).

Creswell (2013: 97) states that:

> *Case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audio visual material, and documents and reports), and reports a case description and case-based themes.*

In the context of this study, the case study is a valuable tool for gaining an in depth understanding of the Jika iMfundo Programme, by zooming in on the experiences of educators and managers in their implementation of the programme in curriculum coverage.

Stake (1995: 3) differentiates between three types of case studies, which are selected based on the researcher's intention, namely an intrinsic case study, an instrumental case study and a collective case study. An intrinsic case study is conducted when the researcher has an intrinsic interest in a particular programme or case because it is unusual or unique (Creswell, 2007; Stake 1995). This means that the phenomenon does not occur at different sites, e.g. a pilot study at a single school to introduce coding. In an instrumental case study, the case is used to understand something else, e.g. there is a research question that the researcher feels can be understood better by studying a case (Stake:1995). The collective case study, also known as the multiple case study, is selected when the researcher selects multiple cases to illustrate the same issue (Creswell, 2007).

The multiple case study design, also known as multisite study, multi-cases or collective case study design, is employed in this study, since more than one teacher and school were selected to explore the issue of educators' and managers' experiences with the implementation of the JiP.

This design refers to a case study where a number of 'bounded cases' are chosen to obtain a greater understanding of the phenomenon that cannot be gained from a single case study. Robert Stake defines a bounded case as a separate entity in "terms of time, place, or some physical boundary"

(Chmiliar, 2010: 582). Merriam and Tisdell (2016: 40) also refer to the multiple case or multisite case studies as comparative case studies and concurs that it involves "collecting and analysing data from several cases and can be distinguished from the single case study that may have subunits or subcases embedded within". By selecting the multi-case study, the researcher was able to compare the perspectives of educators within each of the schools. The educators' and managers' views were also compared. Comparisons were made between the three schools to elicit their experiences with the implementation of the JiP. How were their experiences the same or different?

The fact that the multi-case study design is used to investigate a phenomenon that is found in more than one real-life setting is one of features that motivated the researcher to select this design over other designs (Bishop, 2010: 590).

The JiP, which is the phenomenon under investigation in this study, has been implemented at primary schools in the King Cetshwayo district. By thoroughly examining the experiences and effects of a phenomenon in a variety of settings, data are generated that reveal patterns within the site and synthesis across sites. Through this study, the researcher looked for patterns in the implementation of the programme within each school and across the three schools. If sound design, conduct, analysis and reporting strategies are employed, the multiple case study (three schools in this study) will produce results that are more persuasive than that of a single case (one school) or a single phenomenon. It is a potentially valuable method for capturing the intricacies of a phenomenon, which in this case is the JiP, and gaining greater insights into their contexts (the implementation of the JiP at schools).

By using the multi-case study method in this study, the researcher was able to understand and document the experiences of the educators and managers with the phenomenon called Jika iMfundo Programme within the schools and across the multiple sites. The researcher also attempted to uncover similarities and differences between the various groups of participants with regards to perspectives of the phenomenon.

The case study research has been criticized for the results not being generalizable as the case under study does not necessarily represent other similar cases **(**Hancock, Ockleford & Windridge, 2009:11). In spite of the issues with generalizability, due to the scope of the case being bounded, the case study provided rich and significant insights into the implementation of the JiP from the perspective of educators and managers.

The aim of qualitative case study design was not to make generalisations but to arrive at an understanding of the issue of the implementation of the JiP through the study of multiple cases. The results of the case study were beneficial in describing the phenomenon called the Jika iMfundo Programme (JiP) and not in "predicting future behaviour" (Merriam,1998:41). It allowed the researcher to come to an in-depth understanding of the JiP through the experiences of the participants at the three sites with its implementation.

3.5 SITE SELECTION AND SAMPLING

Selecting individuals from a population to be a part of a study is known as sampling. Polit and Hungler (1999:37) view a population as the "totality of all the objects, subjects or members that conform to a set of specifications". The concept of a population in research includes "every individual who fits the criteria (broad or narrow) that the researcher has laid out for research participants" (Given & Saumure, 2008: 644). The population from which the sample was selected included all primary schools within the King Cetshwayo district of KwaZulu-Natal that were piloting the Jika iMfundo Programme. While it may have been ideal for a researcher to collect data from the whole population, it was impractical due to the availability of resources or lack thereof (Harding, 2013: 16).

Gray *et al.* (2007: 202) define sampling as "the selection of a relatively small group of individuals from whom we obtain data in order to be able to generalize about a larger group". Patton (2015: 264) avers that the difference between quantitative and qualitative studies are most clearly illustrated by the "logic that undergirds their sampling approaches". The author goes on to explain how qualitative inquiry focuses in depth on small samples which may even include a single case.

Various sampling techniques may be used to select a sample from within a population. Researchers need to decide between probability and nonprobability sampling. Probability sampling, which is used to study a large population and make generalisations about the population from the results, is time consuming, complex and costly and is used mostly in quantitative studies. Non-probability sampling involves the selection of a sample in which the probability/chance that a subject is selected is unknown and this method is normally criticised for resulting in selection bias in the study (Acharya, Prakash, Saxena & Nigam, 2013: 332).

Nonprobability sampling was used in this study since the researcher's intention was not to generalise the results to other cases but to gain a better understanding of the implementation of the programme at the sites in the study.

The most common nonprobability sampling technique is purposive or purposeful sampling as referred to by Patton (2015: 264). Patton explains that the use of the terms 'purposive' and 'purposeful' are a matter of choice by the researcher when referring to sampling. He defines purposeful sampling as the logical selection of information-rich cases that would illuminate the question being investigated (Ibid.). This definition is similar to the one on purposive random sampling provide by Yin (2010: 88), in which reference is made to the deliberate selection of information-rich cases with a goal of studying information-rich cases that would yield relevant and plentiful data on research question.

Patton (1990: 179) draws attention to the fact that a small sample can also be randomly selected. The researcher used random sampling within the small sample of schools selected to select educators that teach mathematics. The names of educators were randomly selected from a list of all educators that teach the subject. A random sample, he goes on to state, increases the credibility of the results substantially. According to Merriam (2009: 77), a set of criteria needs to be drawn up that matches the aims and objectives of the study and directs the researcher in the selection of "information rich cases". Purposeful sampling is therefore also referred to as criterion sampling (Ibid.).

Patton (1990:169) argues that:

> *the logic and power of qualitative purposeful sampling derives from the emphasis on in-depth understanding of specific cases: information-rich cases. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposeful sampling.*

The qualitative case study, unlike other qualitative designs, such as "phenomenology, ethnography, grounded theory and narrative", requires sampling to be done on two levels which Merriam and Tisdell (2016: 99) refer to as "Two Tier Sampling". The researcher first had to identify a case to be studied. In this instance, the researcher had questions about the implementation of a new programme at schools in the King Cetshwayo district.

Purposive sampling was conducted as the cases selected all fitted the criteria that was selected by the researcher, in order to serve the purpose of answering the research question. The researcher

felt that an in-depth study of multiple cases would provide more information on the problem, instead of a single case. A set of criteria had to be identified and listed and all the cases had to meet these criteria. The three schools that formed the case were selected on the basis that they were in the Richards Bay Circuit of the King Cetshwayo District in KZN and they were English medium primary schools which were implementing the Jika iMfundo Programme in mathematics. The schools selected were easily accessible to the researcher in terms of proximity. They were in the same district and circuit in which the researcher is located. Therefore, in the selection of the district, circuit and schools, purposive convenience sampling strategy was utilised. The researcher first identified schools according to the criteria that were selected (purposive sampling) and thereafter, the schools that were located in close proximity to the researcher were selected so that the researcher could have ease of access.

The researcher gained access into these sites ethically by obtaining permission from the KZN DoE first. The consent to conduct research was presented to the gatekeepers at school, who are the principals. Besides having problems finding the individual responsible for processing applications for permission at the KZN DoE, and having to wait for weeks for the consent to be granted, everything else with regards to access proceeded smoothly. Once permission was obtained and cases were selected, the researcher had to conduct the second level or 'sampling within a case' (Ibid.).

A list of names of all educators teaching mathematics, in each of the three phases (FP, Intermediate and Senior) was obtained from the personnel register at each site. Random sampling (where each educator had an equal chance of being selected) was then utilised to select one educator from each phase. This formed the sample of nine educators. Purposive sampling was already conducted in tier one as all the educators fit the criteria that was selected. With regards to managers, there is one HoD in each of the three phases at each of the schools. Once the names of the HoDs was obtained from the school register, the same procedure of random sampling was employed to select one HoD in each school making it three HoDs in total. The choice between the principal and deputy principal at each of the three schools depended on who assumed the leading role in curriculum management at the school and in each case, it was the principal. The sample of fifteen participants comprised of nine educators, three department heads, and three principals. The size of the sample was a delimitation, but which also allowed the researcher adequate time to interact with the participants in greater depth, since the intention of the researcher was to come to an understanding of how participants make sense of the JiP. A larger sample would have been a challenge with regards to time and resources to conduct interviews and observations. A limitation

of the small sample is that the findings cannot be generalised. This however is more important in quantitative studies than in qualitative, as the focus is not on generalisation but on understanding a phenomenon in depth. The selection of a large sample would not have been practical for the researcher in a study that involved one-on-one interviews with all participants.

One educator from each site was randomly selected for classroom observation. The choice of one educator was deliberate as it facilitated the comparison of the documents (educator's file, HoD's file and learners' books), provided an understanding of how the JiP is being implemented in the classroom and allowed for triangulation.

This sample formed the information-rich cases that were studied to elicit data to answer the research questions.

Table 3.1 Characteristics of the Sample

SCHOOL	EDUCATOR	PHASE	TEACHING EXPERIENCE (years)	DEPARTMENT HEAD	EXPERIENCE (HoD)	PRINCIPAL	EXPERIENCE (PRINCIPAL)
A (SCHA)	EDA1	FP	25			P1	12
	EDA2	IP	5	HoD1	12		
	EDA3	SP	15				
B (SCHB)	EDB1	FP	16			P2	20
	EDB2	IP	8				
	EDB3	SP	18	HoD2	19		
C (SCHC)	EDC1	FP	23	HoD3	8	P3	10
	EDC2	IP	10				
	EDC3	SP	9				

3.6 ETHICAL CONSIDERATIONS

Ethics or morality refers to standards of acceptable behaviour towards others (Wiles, 2013: 4). Determining what constitutes acceptable behaviour may prove to be problematic as people's perceptions of proper behaviour is subjective. Researchers dealing with human subjects, need to adhere to a code of ethics that does not violate the rights of the subjects. They need to behave in a manner towards others as 'they would want to be treated themselves', following the 'Golden Rule', 'Do unto others as you would have others do unto you'.

"Sound research", in Halai's view (2006: 5), "is a moral and ethical endeavour and should be concerned with ensuring that the interests of those participating in a study are not harmed as a result of research being done". This is clearly emphasised in the statement by Leavy (2017:24) that "Every aspect of dealing with the 'who' of our study -the people involved- is an ethical decision". This author also identified two components of the research practice that need to be guided by research ethics: deciding on the study group- methods of the identifying participants for the study; how the results are communicated to the "interested parties", which she states are just the "tip of the iceberg" (Ibid.).

Ethical principles were considered and applied at each phase of the study. The researcher employed the "principlistic model" purported by Beauchamp and Childress (2013) in this study by focusing on principles of autonomy (which include informed consent, voluntary participation, confidentiality and anonymity), beneficence (responsibility to do good), non-maleficence (avoidance of harm) and justice (fairness). These principles are also required by the Ethics Committee of the University of South Africa (UNISA) to which an application was submitted and approved (see Appendix A). The principles are briefly explained below:

Autonomy

Autonomy has various meanings but for the purposes of this study, the definition presented by Beauchamp and Childress (2001: 58) was used "Personal autonomy is, at a minimum, self- rule that is free from controlling interference from others and from limitations, such as inadequate understanding that prevent meaningful choice". The implication here is that an autonomous person has the ability to choose freely in accordance with his or her own plans. In light of this principle, the researcher obtained the consent of participants without coercing them into participating in the study. The choice ultimately for participation in the study was made by the participant. In the event that an educator refused to participate in the study, then the researcher would have had no other

option but to respect their decision, as it is within their rights. The rights of autonomy of the participant were recognised and kept in the forefront of the mind the researcher.

Informed Consent

In order for the researcher to gain access into schools and participants in the King Cetshwayo district to conduct the study, permission was acquired from the KZN DoE. Application forms were accessed from the KZN DoE website. Once the application was approved, the Richards Bay circuit manager was informed of the study. The permission letter from the KZN DoE to conduct the study was then presented to the school principal to gain access into the schools. Only upon receiving the principals' permission for the study to be conducted at the schools, did the researcher make contact with participants.

Informed consent is when potential participants freely agree to be part of your project, with full understanding of the research activities and any risks or benefits attached to being part of it (Kielmann *et al.*, 2011: 54) and is a response to dealing with the issue of participant vulnerability (Herrera, 2010: 428). Participants had questions about the nature of the study and its significance. They also raised concerns about the duration of the study and the amount of their time it would require. Erickson (1985: 142) states that the researcher "should be wise to take great care in being explicit about uses of information and access to it". The author goes on to state that if participants give their consent freely and if they have been fully informed of the objectives of the study and of any risks and benefits to them, "then deception and faking are minimized, as is passive resistance to the researcher's presence".

All the necessary and pertinent information about the study was provided to the participants at the first meeting, with the assurance that further questions would be answered as honestly as possible as they arose. Participants were not coerced into participating in this study. Participation was strictly voluntary. Participants were at liberty to refuse to participate and they were afforded the option to leave the study at any stage if they so wished. To this end, participants were sensitised to the nature and purpose of the study, and more importantly, their role in it before they could make a decision to participate in it. Furthermore, participants had to complete a consent form, which was attached to the information letter that was given to them (these were in English, the language of teaching and learning (LOT), at the schools), thereby giving their consent to participate in the study, before the research instruments were administered to them (see Appendix C).

The following information, recommended by Gray *et al.* (2007: 91), was included in the informed consent:

- The name of investigator and her affiliation.
- A description of the nature and purpose of the study.
- Procedures that would be followed, including the time frames for the study.
- The frequency of contact with the participants.
- Interviews will be tape recorded.
- A disclaimer stating that participants could refrain from answering any questions or withdraw from participating altogether.
- A description of all known or anticipated benefits and harm to the participant that may arise from their participation in the study.
- Procedures to ensure confidentiality of data and anonymity of participants.
- A statement concerning the availability of research findings to participants.
- Information on the length of retention and security of data.

Information about the digital recording of interviews and scanning of documents were also included in the consent and information document. When participants signed the consent form, they essentially gave their assent to the use of these methods in gathering data.

During the course of data gathering, especially the observation stage, participants were offered another opportunity to "evaluate their comfort", as this allowed the researcher to be more considerate of the participants, especially on the issue of informed consent (Cieurzo & Keitel, 1999: 69). This means that before the classroom observations were conducted, the participants were once again asked if they were comfortable to participate in this activity. They were told that if they were, at any stage, unhappy with any part of the process, they had the option to withdraw from the study.

Anonymity and Confidentiality

Informed consent and confidentiality are linked (Cieurzo & Keitel, 1999: 69). Researchers have a responsibility to ensure the privacy of the participants. Kielmann *et al.* (2011: 54) caution against researchers making the following common errors during research: making contact with participants without "advance intimation", asking questions that are distressing and offensive and observing participants without their prior knowledge. Confidentiality is an important concern. Interviewees should not normally be named (unless their permission has been explicitly sought,

and this should only be done where a name is essential for the pursuit of the research in question). Participants in this study were guaranteed of complete anonymity and confidentiality. Although their identities were known to the researcher, they were assured that the information they provided would be used in such a way that it would make it impossible for others to identify them. In other words, they were assured that no names, location and other personal details are provided in the research report. Pseudonyms are utilised to refer to participants and the schools that are part of the study (Halai, 2006: 6) and this is another measure of maintain anonymity.

Codes were assigned to the participants and the schools to conceal their identities and ensure confidentiality in the study. The three educators at the first school were coded EDA1; EDA2 and EDA3. The first school was called SCHA. The HoD at SCHA was coded HoD1 and the principal at SCHA was coded P1. The same procedure was used for educators, HoDs and principals at SCHA, SCHB and SCHC.

Data were collected and processed in such a way so as to protect the identity of participants. The researcher ensured that the participants were aware that all information provided was for research purposes only and that their anonymity was guaranteed. Participants were guaranteed that the transcripts and digit recordings of interviews, and prints of the scanned documents will be stored in a steel cupboard under lock and key for a period of five years. Thereafter, the information will be destroyed. Furthermore, digital copies of participants documents will be destroyed once they are printed.

Beneficence

To protect participants from harm implies "weighing the costs and benefits of the research" (Cieurzo & Keitel, 1999). Information about the risks and benefits in participating in the study were provided to participants in the application for consent. The following procedure was adopted to address ethics in the interviews: the procedures for interviews were laid out in writing, and were clearly explained to interviewees before interviews proceeded. The interviewees were provided with the written version of these procedures. Interviewees had to be happy with the location of the interview, and were offered alternatives (public/private).

The data gathered was not of a highly sensitive nature. Questions that were asked of the participants pertained to curriculum issues and school related matters and did not involve provision of information about the participants' private/personal lives so it did not result in embarrassment to the participant and the school in any way.

The researcher ensured that the "research participants were protected from undue intrusion, distress, indignity, physical discomfort, personal embarrassment, or psychological or other harm" (Stevens, 2013: 21), by regularly assessing each step of the research process. Participants volunteered their time and provided their views on the implementation of a programme at the site. The schools, as a site at which the interviews were conducted, were considered to be secure as they have security guards and fencing. These are also official buildings belong to the KZN DoE, which have strict protocols with regards to access. The buildings are also well maintained and do not pose a health risk to the participants.

All participants were adults over the age of 18 and were not considered vulnerable in any way. The study is considered to be of low risk, as, if anything, it simply resulted in an inconvenience to the participants. Observations were conducted in the classroom during the teacher's teaching period. The researcher acknowledges that many people experience some discomfort and anxiety when being interviewed or observed. The researcher therefore had to build a relationship of trust with the participants and the gatekeepers. Participants were reassured that if they experienced any discomfort at being observed, they should freely indicate this to the researcher and they were reminded of their right to withdraw from the study should they experience any emotional discomfort.

Participants were assured that interviews would be rescheduled at the request of participants due to ill health, mental fatigue or any other reason and that they could withdraw from the study without providing any reason. The researcher continuously assessed the process for anything that would represent physical and emotional harm to the participants by regularly engaging the participant during the interviews on their feelings.

3.7 DATA COLLECTION PROCEDURE

This study employed semi-structured interviews, observation and document analysis to collect data required to address the research questions. The selection of these qualitative methods, was influenced by the researcher's choice of the more general constructivist and specifically interpretivist paradigms. These methods are considered by interpretivists to be better than methods such as surveys because they are more effective in determining human interpretation of their world (Willis, Jost & Nilakanta, 2007). According to Merriam (2016: 2) since qualitative inquiry is focused on 'meaning in context", it requires data collection instruments that are sensitive to

underlying meaning when gathering and interpreting data. These instruments she refers to here are interviews and observations and analysing which she states are central to qualitative enquiry. Three methods of data collection were utilised as, the convergence of multiple methods referred to as triangulation, in qualitative research improves the credibility and trustworthiness of studies (Yin, 2010). As indicated in Chapter 1 and in section 3.3.1, data were only collected after obtaining permission from the KZN DoE (see Appendix B).

3.7.1 Semi-Structured One-on-One Interviews

A common interview is a "person-to-person" encounter, where the interviewer obtains a special kind of information from the interviewee about his or her thoughts on a phenomenon of interest (Merriam & Tisdell, 2016:108). Interviews are also necessary when behaviour, feelings and peoples' interpretations of the world cannot be observed, and when data are required on past events that cannot be replicated (Ibid.).

The researcher's choice of interviews as a data gathering tool was influenced by Van Dalen's (1979) contention that people are more willing to communicate verbally than in writing and that this facilitates the disclosure of information more readily and allows the researcher the opportunity to probe for further information. The one-on-one interviews were chosen over focus group as the researcher intended to ascertain the individual experiences of educators and managers with the phenomenon and not that of groups. As qualitative investigations are interested in eliciting the views of individuals, the interviews are usually open-ended and less structured.

Since the goal of the researcher was to look for patterns in the participants' responses and to determine how the participants feel about the JiP the semi-structured interview which is an alternative to the open-ended interview (Ibid.:110) was chosen in this study. Compared to the structured interview, the semi-structured approach is more open-ended, it has some structure and is guided by the interviewer (Smith, 2019). It also allows for elaboration and clarification on responses to open ended questions through follow up questions. It is for this reason that Adams (2015) considers the semi-structured interview to be advantageous. and for the interviewer to redirect the discussion if the interviewee digresses from the topic. Hennink (in Merriam & Tisdell, 2016:114) delineates the "interactive discussion" as a unique characteristic of focus group research, through which data are generated. While participants share their views at these discussions, they are also privy to the views of others and may "refine their own views in light of what they have heard" (Ibid.).

The reasoning therefore of the researcher in not using the focus group discussion was that the focus was on individual views, not groups; to avoid participants' fear of intimidation by other members of the group and to avoid participants refining their views to suit the group. People feel more comfortable to share their thoughts when they are alone with a researcher. They are not afraid about how others will react to their responses.

The interviews were semi-structured, which allowed the researcher to ask other relevant questions besides the ones on the interview schedule, probe further and seek additional information (Pawar, 2004: 29). There were instances when a participants' response required clarity e.g. when asked to discuss their views on the training provided, the researcher needed to find out how often these were provided, what kind of training, who provided etc. If some details were not forthcoming, then the researcher used more direct questions to probe for more information.

A semi-structured interview schedule was utilised to conduct interviews with educators, HoDs and principals (see Appendices D, E, F). As the name suggests, the semi-structured interview schedule is somewhat structured. The degree of structure and lack of structure varies from one research project to another. Some may lean more towards a structured interview and some towards the unstructured interview. Others may incorporate elements of both (Pawar, 2004: 30). The interview schedule compiled for the study comprised questions on views on change, preparation for change, support provided for the implementation of change, challenges experienced in the implementation of change as well as the role of stakeholders in the implementation of change. Part of the questions for managers included questions on how the JiP and the curriculum is managed at schools. The researcher used the questions listed on the interview schedule, but did not stick strictly to the wording or the order. Further questions such as 'Please clarify for me how your mentoring system works', which arose from the responses of the interviewees were explored. The dates, times and the venue for the interviews were negotiated with the principal and participants at each of the sites. Most of the interviews were conducted during the participants non-teaching periods. So the time spent at the schools varied depending on the number of educators that were available for interviews on a particular day. The researcher also did not want to disrupt teaching and learning at the schools by removing educators from their classrooms. All interviews were completed within three weeks. The interviews ranged from 45 minutes to an hour and were recorded on a digital recorder. This is a useful method of recording interview data because it is difficult to write down everything the interviewee is saying. Furthermore, by recording the interview, the researcher is able to transcribe and analyse the data at a later stage without the fear of being unable to recall important aspects of the conversation. It also allows for responses to be scrutinised. Participants provided their consent

to participate in the interviews and for the use of the digital recorder when they signed the consent form.

During the fourth week, the researcher spent a day at each school doing follow-up interviews. Clarity or additional information that was not forthcoming during these interviews, was acquired telephonically or via email from two educators. The researcher made notes during the interviews of nonverbal data such as gestures and facial expressions which could not be captured on the voice recorder. These nonverbal responses also provide relevant information about the emotions of participants towards the phenomenon.

Through the interviews, the researcher was able to obtain data on the educators' and managers' individual perspective on the implementation of the JiP, their roles in the implementation process, the challenges and best practices during implementation, the role of managers in implementing the JiP and managing the curriculum and their thoughts on the sustainability of the JiP. Although the personal perspective of the informant is what is needed in qualitative studies, this information will be viewed in the light of the data obtained from observations and document analysis (Merriam & Tisdell, 2016: 136) to allow for triangulation.

3.7.2 Document Analysis

Document analysis is a "social research method" which entails gathering data by analysing and interpreting documents and records that are relevant to a study. It is used by researchers in conjunction with other qualitative research methods such as interviews and observations (Bowen, 2009: 32), to improve the credibility of a study through triangulation (Bowen, 2009; Heffernan, 2001) which is 'the combination of methodologies in the study of the same phenomenon' (Denzin, 1970, p. 291). Document analysis involves identifying and reading documents that are relevant to the study. The approach to document analysis is the focus on its contents. Documents are therefore viewed as "conduits" that encompass meaningful messages that are communicated between the writer and the reader (Prior, 2008: 231). These messages which are normally in a written format may also include other formats, such as maps, architectural plans, films, and photographs (Ibid.). Merrian and Tisdell (2016:162) aver that the word "document" is generally used "as an umbrella term to refer to a wide range of written, visual, digital, and physical material relevant to the study (including visual images)".

Flick (2014b :368) argues that qualitative research is enriched by the careful and critical attention to gathering and analysing documents. Besides reading the documents closely, document analysis involves coming to an understanding of how the documents are compiled, produced and used.

Qualitative document analysis allows for the "tracking of a discourse" or follows certain issues or themes over time frames. (Nagy, Biber & Leavy, 2008: 130).

The following documents were analysed in this study: educators' personal portfolios, SMT reports on educator's curriculum coverage, curriculum tracking tools and learner workbooks (Jika and DBE) which in conjunction with the interviews and observations allowed for data methodology triangulation.

From these documents, the following information was elicited on key issues to address the research problem:

a. Educator files: classroom practices of educators in terms of planning and presentation of mathematics lessons, tracking and reflecting on curriculum coverage.
b. HoD supervision file: Use of supervision tools in managing curriculum coverage and collecting evidence of support to educators
c. Learner workbooks: quality of the resources provided and the use of resources in improving curriculum coverage.

The documents listed were requested from the participants. The HoD assisted by gathering the documents and arranging a room at the school in which these documents could be viewed by the researcher. The researcher spent a day when interviews were not scheduled to view the documents. Notes were made on the contents of the documents and relevant parts of the documents were scanned on a smart phone with the permission of the participants, for analysis later. This was done to facilitate an in-depth study of the documents at a later stage. The researcher looked for and interpreted the information from the documents in terms of their relevance to the practice of planning for, tracking of and reflection on curriculum coverage.

According to Prior (2008), matters relating to the consumption of documents are most often based on their use and function. The aim therefore of using this collection of documents was to determine their availability, their importance as a resource to educators and managers, and the way in which the participants are utilizing them to implement the JiP.

3.7.3 Observation

Observation as a method of data collection is preferred by many qualitative researchers as it generates data that can be "seen directly…heard or felt" (Stake, 2010: 90). Zikmund and Babin (2007: 237) view scientific observation as the systematic process of recording the behavioural patterns of people, objects and occurrences as they are witnessed. Observation can be "structured

or unstructured or participant or non- participant" (Harding, 2013: 21). Croll (2004) refers to systematic observation as structured observation. In structured observation, observations are recorded on an observation schedule consisting of criteria that are pre-determined (Croll, 2004: 1097) so that the observation can be more systematically conducted. The researcher will know in advance what is to be observed. This is the motivation for the researcher using structured observation to conduct classroom observation.

Driscoll (2011: 160) identifies two ways that observation is usually conducted: participant observation and unobtrusive observation. In participant observation the researcher needs to be present and the participants are aware that they are being observed whereas in unobtrusive observation they are not (Ibid.). Non-participant observation was selected as it is used widely in case studies. The researcher inserts him/herself into the social system to the simply observes activities, events, interactions among people in a social system, in order to gain knowledge on the phenomenon in its natural context (Mills, Durepos & Wiebe, 2010: 610). He/she does not participate or influence the activities in any way. The non-participant observation may be "overt", where the participants are aware of the researcher's presence there for the purpose of research, or "covert", where the participants are observed without their permission (Ibid.).

In this study, the researcher assumed the role of an overt, non-participant observer to observe the participants in the natural context of the classroom, conducting a mathematics lesson. This meant that there was no interference from the researcher in this activity, to determine how they are implementing the programme in their practice. This method of observation allowed the researcher the opportunity to make an in-depth study of the activities that educators intimated in the interviews, that they practiced, in the implementation of the JiP. Other reasons for the use of observation as highlighted by (Merriam & Tisdell, 2016: 139) is that it allows the researcher to record information: of the context, specific incidents, behaviours that may be used as reference points for ensuing interviews. Results from the observation provided corresponding evidence concerning human behaviour and thereby strengthened and corroborated the results from the other data collection methods.

Since observation means entering the domain (school and classroom) of the participant (educator), the first step was to build a relationship of trust with the participants. The observation of lessons was planned and organised. The three educators that were observed from the three sites, were informed and their consent was obtained before proceeding with the observation. Dates and times of the observations were determined in consultation with the participants. Observations ranged

from 45 to 60 minutes depending on the length of a period at each of the sites. These observations were conducted at the convenience of the educators. The researcher announced her arrival at the reception and followed the protocols of the school with regards to visitors. The researcher was escorted to the classes by the HoDs at the three schools. This was an important aspect of gaining access in the gatekeeping process. The researcher greeted the learners and sat at a desk at the back of the classroom. The researcher did not interfere with the lesson. A copy of the worksheets/ resources and the teacher's file were left with the researcher to view as the lesson proceeded. An observation schedule (Appendix G) which had both a structured aspects and also allowed for the researcher to make additional comments, was used to verify the information provided by the participants during the interview and in the documents that they provided for analysis.

The researcher made comments on the observation schedule focusing on the following criteria that were preselected: lesson planning and preparation (how lessons were planned using the curriculum planner and lesson plans); teaching and learning strategies (are the strategies provided in the planner being effectively utilised to present lessons?); learner teacher support material (are educators using a variety of resources in their teaching?); activities (are the educator and learner activities consistent with the planning?) and assessment(are the type and number of assessments in line with the tracker and CAPS?).

Other notes on the context were also recorded as the context according to the constructivist paradigm plays an important part to the creation of knowledge. Since observation is based on the researcher's subjective interpretation, a criticism of this method as suggested by Merriam and Tisdell, can be the "subjective and therefore highly unreliable" and "selective nature…of human perception" (Ibid.: 138). Essentially, this implies that what the observer selects to record and how this data are interpreted, is very individualised. Two people viewing the same activity may perceive it very differently depending on their values and interpretations (Liu & Maitlis, 2010: 611). To overcome this bias, the researcher used preselected criteria based on and interpreted through the lens of the Jika iMfundo Programme. Therefore, what was selected for observation, and how it was interpreted, was dictated by what the requirements for classroom practice are according to the JiP.

3.8 DATA ANALYSIS

Qualitative case study data analysis which involves making sense of data, followed the interpretivist paradigm. The qualitative case study is based on the interpretation of data from

interviews, observations and document analysis. Data were analysed in such a way so as to allow the researcher to make interpretations. Since there are no "universally applicable techniques to generate findings", like in quantitative methods, the qualitative researcher's "analytical and critical thinking skills played an important role in data analysis" (Dudovskiy, 2011: 3). The researcher also needed to be creative, disciplined and approach data analysis systematically (Taylor-Powell & Renner, 2003: 1), as it is a long and tedious process. Discipline and a systematic approach was required in the "procedural" aspect of data analysis (coding, sorting, categorising), while creativity was required to interpret and explore the relationships within the data (Coffey & Atkinson, in Mills, Durepos & Wiebe, 2010: 750).

In this study, the data were analysed and compared and the patterns were identified using content analysis, which is a "procedure" for the placing of "verbal or behavioural data" in categories in order to classify, summarise and tabulate them (Hancock, 1998:17). The categories into which information was organised were related to the central questions of the research (Bowen, 2009).

Roller (2019: 2) views content analysis as "the systematic reduction of content, analysed with special attention to the context in which it was created, to identify themes and extract meaningful interpretations of the data". Content analysis is often viewed as a quantitative method (Mayer, 2015; Harding, 2019) that involves statistical analysis (Drisko & Maschi, 2016: viii) considers the counts of frequency in which certain factors occur (Harding, 2019: 48). For the purposes of this qualitative study, content analysis will be viewed as a method of data analysis of content collected by means of methods such as in-depth interviews and observations (Mayer, 2015: 62) which uses narrative analysis methods instead of statistical analysis (Drisko & Maschi, 2016: viii). The majority of data analysis involved organising "categorisation of verbal or behavioural data, for purposes of classification, summarisation and tabulation" (Hancock, Ockleford & Windridge 2009:24). Essentially data analysis comprised the activities of consolidating data, coding, categorising, forming themes and then interpreting which are consistent with content analysis. The process of content analysis involved:

> *close reading of relatively small amounts of textual matter; - the rearticulation (interpretation of given texts into new narratives accepted within scoharly communities which are sometimes opposed by positivist traditions; the analysts achnowledge that they operate in hermenuetic circles implying systematic interpretation of texts.* (Krippendorf, 2018: 22)

Data analysis and data collection were conducted concurrently and were repetitive. It was important to analyse the data as soon as possible so that the process was expedited while the events were still fresh in the mind of the researcher and to avoid the accumulation of data.

3.8.1 Semi-Structured Individual Interviews

All interview data from each of the sites were consolidated, reduced into categories and then interpreted (Merriam & Tisdell, 2016: 202). The starting point of content analyses are texts (printed matter, recorded speech, visual communications, works of art, artefacts), which are unlike physical events in that they are meaningful to others, not just the analyst (Krippendorff, 2004: 21). Once the interviews were transcribed and verified by the participants as a true reflection of what had transpired at the interviews, the researcher began the reduction process which entailed selecting, categorising, comparing, synthesising and interpreting data to provide explanations on the phenomenon of interest (Leedy & Ormrod, 2001). In essence, data reduction is the grouping of and processing of raw data using a variety of methods to come to understand their meaning and to enable interpretation (Gray *et al.*, 2007: 48). Miles and Huberman (1994: 10) interpret data reduction as the selection, simplification, abstraction and transformation of the data from field notes and/or transcripts.

The following steps, postulated by Creswell *et al.* (2011: 35), were adopted when dealing with the interview data. The key part of data analysis involved transcribing interview data. Data analysis began with the researcher listening multiple times to the recordings of the semi-structured interviews held with the educators and managers, and then transcribing the data. This step facilitated a closer examination of data which is imperative for interpretation. Thereafter, the researcher read through the transcripts to gain an overall understanding of the data and determined a coding frame (sentence, paragraph, or phrase). Determining what the participant was saying in the coding frame involved assigning code labels in the left margin. The participants' words were used wherever possible and the researcher refrained from over coding and making interpreting comments.

The researcher then reduced the data into practical units by using "open and thematic coding" (Evers & van Staa, 2010: 754), which is a categorizing strategy for qualitative data analysis which is most extensively used. Qualitative data analysis, according to Merriam and Tisdell (2016: 201), is predominantly inductive and comparative. Inductive analysis, according to Thomas (2006: 238), is a reference to all the approaches that involve the primary use of "detailed readings of raw data to derive concepts, themes, or a model through interpretations made from the raw data by an

evaluator or researcher". This means that by comparing all the items in the interviews, the researcher can reduce them into a number of categories. Overlapping codes were eliminated and the relevant codes were combined into themes

3.8.2 Structured Observation

Data from the classroom observations which were collected by means of an observation schedule, were analysed using coding. In coding, the data segments were labelled and thereafter grouped by category, examined and compared, both within and between categories (Flick, 2014b: 24). In this way, data that are relevant to the theme were separated from other data. Data were then summarised under the categories that were used in the observation schedule. Data obtained from this process were described and interpreted in light of the key research questions.

3.8.3 Document Analysis

Documents were analysed using discourse analysis. Foucault (in Prior, 2008: 1) argued that "what is written is inextricably locked into what is done". This implies that there is an "essential connection among the documents (and their contents), practical action, and sites of action—all of which express aspects of a discursive formation" (Ibid.).

While the methods of content analysis are used in hermeneutics, which is the science of the "interpretation of the meaning of texts, language and visual representations", the emphasis is on "the qualitative data as a mechanism of communication rather than as a practice" (Waitt, 2005: 165).

The aim of the discourse analysis on the other hand, is to "explore the discourse in terms of actions" of the participants, instead of simply focusing on the analysis of the text (Waitt, 2005: 164). In the context of the study, this involved analysing the contents of the documents, such as the educator's file, HoD supervision file and the workbooks, which were compiled without the interference of the researcher. This analysis revealed what the practices of educators and managers are in terms of curriculum coverage which is an important feature of the JiP.

When analysing the documents, words, themes, ideas, phrases and concepts that were related to the phenomenon of Jika iMfundo Programme were identified. The focus was not solely on understanding the content (what is going on) but on making connections between the "word and the world" (Silverman, 2006: 96). This implied linking what participants alleged in the interviews about the implementation of the JiP in the classroom to what was revealed about their practice in the written text. This allowed for triangulation of data through verification.

3.9 INTERPRETATION OF FINDINGS

Phophalia (2010: 21) points out that, while "gathering and analysing data" are important, the "interpretation of data" is also necessary. This involves making "inferences" and drawing conclusions from results of the analysis in other words it is the quest for a "broader meaning of research findings".

"Qualitative data analysis is not designed to generate universal laws that causally linking together decontextualized independent variables" but on "generating explanations of contextualized activities" (Tracy, 2013:219). The aim, therefore, of data analysis was to develop and interpret the data from interviews, observations and documents, to acquire an understanding of how participants experienced JiP from their shared and interpreted perspectives.

By coding and categorising and finding themes, the researcher had no intention of generalising and finding causally relationships between variables but on coming to an understanding of individuals' interactions with the JiP. The data from this multi-case study was interpreted in the following stages as articulated by Chmilliar (2010: 584): Initially each of the cases was treated as a single case and all the data within the "bounded case" were carefully analysed and organised into a comprehensive narrative. Thereafter the three cases were compared for similarities and differences between the key components and patterns were identified. These were utilised to form more general explanations.

3.10 ISSUES OF TRUSTWORTHINESS

The quality of empirical studies has often been challenged by positivists (Shenton, 2004; Merriam & Trussell, 2016; Guba, 1990) as issues of validity and reliability in these studies cannot be addressed, as in quantitative studies, where statistical methods are applied to establish validity and reliability. There are various criteria for judging the quality or goodness of a study. Since the terms "internal validity, external validity, reliability, and objectivity" are the recognized standards for trustworthiness in quantitative research, qualitative researchers have redefined and adopted alternate terms to indicate trustworthiness of a study (McGinn, 2010: 243). McMillan and Schumacher (2006: 324) delineate validity as the degree of congruence between the description and explanation of the phenomena given by the researcher and the actualities of the event as perceived by the participant. A study is valid if there is a high degree of agreement between interpretation of the events by the researcher and what actually transpired, according to the

participant. According to Golafshani (2005: 598), "reliability is defined as the extent to which results are consistent over time". Studies are reliable if they can produce the same results when replicated. Qualitative research therefore ensures the quality of a study by embracing standards such as validity, credibility, rigor or trustworthiness (Morrow, 2005 :252). The qualitative researcher aims to design and incorporate methodological strategies in the study (Noble & Smith, 2015: 34) that will ensure the trustworthiness of the study.

Trustworthiness of a research study is important to the researcher as it is an evaluation of the study's worth or accuracy. Guba, (in Krefting, 1990) identified four criteria, *truth value, applicability, consistency, and neutrality,* that address quality in any type of research. It was considered appropriate for qualitative and quantitative research to have their own definitions of these criteria based on their philosophical and conceptual differences. The criteria of credibility, transferability, dependability, and confirmability put forward by Lincoln and Guba (1985) are widely used by qualitative researchers as alternatives to validity and reliability in quantitative studies and are consistent with the truth value, applicability, consistency and neutrality which have been adopted in this study to ensure the trustworthiness (credibility) of the findings.

Truth Value

Truth value refers to the researcher's confidence in the 'truth' of the findings based on the research design, informants and context (Krepting, 1990). Firstly, the researcher had to use reflexivity and reflection, which require the researcher to acknowledge that multiple perspectives and methodological bias exist (Noble & Smit, 2015: 34). To address this the researcher ensured that the accurate perspectives of the participants were presented. The researcher also used reflexivity and reflection on her own perspectives and the methodology. These were recorded in field notes during the data collection and analysis process. The willingness of the sample of twelve to share in depth their experiences on the implementation of the JiP through interviews, by allowing the researcher to view their lessons and by availing their documents for analysis, enabled ongoing interpretation and clarification of findings. To ensure the credibility of the findings, prolonged engagement in the field provided insight into the "context of the study, which minimizes the distortions of information that might arise due to the presence of the researcher in the field" (Anney, 2014: 276). The time spent at the three sites with the participants, observing and conducting interviews, provided insights into their actual practices. As a staff member at one of the sites, the researcher was able to gain a good understanding of the context in which the JiP is implemented at schools. Interviews were tape recorded and verbatim transcripts of these were

maintained to ensure that notes were not only taken of what the researcher considered to be significant but were true reflections of the experiences of educators and managers with the management of curriculum coverage. The tape recordings also allowed the researcher to revisit the data repeatedly for analysis in order to identify emerging themes. Intensive interviewing resulted in the acquisition of "rich" data that was varied and comprehensive that provided a complete and in-depth view of what had transpired (Maxwell, 2008: 244).

Member checking was also used to improve the credibility of the findings. It is a method in which interview or analysed data are returned to the participants for validation (Birt, Scott, Cavers, Campbell & Walter, 2016:1802). Participants at each school were invited to read through and check the interpretations of the findings and the conclusions that were reached to see if they actually reflected their perspectives on the JiP.

Applicability

Applicability which is the consideration given by researchers to whether the findings of a study can be applied to other contexts, settings and groups (Noble & Smith, 2015: 34). Applicability was achieved by providing rich and descriptive details of the cases and the contexts of the study, in order to facilitate the transferability and evaluation of the conclusions to other schools that are implementing the JiP.

Consistency

Consistency refers to the dependability of the research results. Noble and Smith (2015: 35) refer to consistency as the achievement of 'auditability'. To achieve consistency of the findings, should the study be replicated in similar contexts, a pilot study was conducted to assess and improve the data collection instruments. The use of a pilot study also improved the credibility of the research instruments. The pilot study was conducted at a primary school to test and fine tune the interview schedule and observation schedule. Some questions on the interview schedule were removed, others added and yet others where modified. Consistency was also achieved by member checking and data triangulation and by providing a "transparent and clear description of the research process from initial outline, through the development of the methods and reporting of findings" (Ibid.).

Neutrality

Neutrality is the freedom from bias (Noble & Smith, 2015: 35). This implies that the findings must not be a function of individual researchers' biases, motivations and perspectives' but that of the informants and the conditions of the research. Neutrality was further enhanced through member

checking, data triangulation. Maxwell (2008: 244) considers member checks to be the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your own biases and misunderstandings of what you observed.

Participants were asked to read transcripts of interviews in which they had participated. The rationale behind this strategy was to establish whether they considered the transcript to be a true reflection of their articulations – in other words to determine if there was a match between their words and what they actually intended. Since the interviews were recorded, the participants could verify that their "articulations" had been "accurately captured" Shenton (2004: 68). The transcripts were emailed to the participants. The majority of the participants provided positive feedback. A few of the participants made a few changes. By doing member checks, the researcher ensured that the findings and conclusions were a true account of what was articulated.

Triangulation is considered to be a "powerful strategy" for improving credibility in research (Krefting, 1990: 219), which may involve a number of different methods such as observation, focus groups and individual interviews (Shenton, 2004: 65). Krefting (1990: 219) identifies four types of triangulation: triangulation of data methods which involves the comparison of data collected from a variety of methods (e.g., data from structured interviews, participant observation, life histories); triangulation of data sources which uses a variety of data that might provide a holistic understanding of the concept under investigation. While methodological triangulation might also describe the use of both quantitative and qualitative methods (Mayer, 2015: 59) this study only uses the qualitative research method, but still employs multiple triangulation strategies which assisted in reducing bias and "it cross examines the integrity of participants' responses" (Anney, 2014: 277).

Firstly, "data source triangulation" was applied by selecting participants from different groups within the school. Gathering data separately from educators, HoDs and principals, is a form of triangulation. The data could be checked for consistency by obtaining the views of different groups of people. Triangulation was also improved by studying more than one case. The use of triangulation also improves the credibility of the study by ensuring that verification is possible. The data from interviews was compared with the classroom observation and the documents to ensure that the responses given were consistent with the evidence from practice. The implementation of JiP was studied at three sites.

Secondly, the use of a variety of methods, such as semi-structured interviews, observation and document analysis, referred to as methodological triangulation (which is use of more than one research method) (Mayer, 2015: 59), resulted in "data type triangulation" (Evers & van Staa, 2010: 754). Mayer (2015) purports that this type of triangulation is often referred to as "the essence of triangulation". Three theories were utilised, namely the theory of change, action theory and the diffusion of innovation theory, in interpreting the data, which according to Mayer (2015) is called theoretical triangulation: the use of more than one theoretical position when interpreting data.

The use of *comparison* in the multiple cases was used to address validity threats in this qualitative study. The researcher's role was to understand the phenomenon as it appeared in the different cases, looking for commonalities and disparities as readers are more interested in what's common in cases and not so much on what's unique as Stake (2006) points out. Comparison was done within each case between the views of educators, HoDs and principals and also across the three cases.

3.11 ROLE OF THE RESEARCHER

The role of the researcher in a qualitative study is different from that of a quantitative researcher. Brodsky (2008: 767) notes that qualitative, unlike quantitative research, which uses software to analyse numerical data and present results as equations, relies on the researcher to analyse, interpret and give meaning to data. This interpretation of data is influenced by the researcher's "professional skills, training, knowledge, and experience" (Ibid.). It is for this very reason that Tufford and Newman (2010: 81) maintained that although qualitative research is a conversational activity that seeks to obtain the perspective of the participant on phenomena, it is subjective in nature. Denzin and Lincoln in (Simon, 2011b: 1) refer to the researcher as an "instrument" for collecting data. Furthermore, Simon (2011b :1) asserts that since "the consumers" of the study want to know more about this "human instrument", the researcher has a responsibility to provide relevant information about himself/herself including his/her biases as well as keep a journal of their self-reflection. Dowling (2008: 748) refers to this continuous self-examination by the researcher on how they have influenced a research project, as "reflexivity". A similar understanding of reflexivity as taking cognisance of the researcher's influence on the participants or topic being studied, and at the same time acknowledging the manner in which the research experience also affects the researcher is provided by Gilgun (in Probst, 2015).

Mauthner and Doucet (2003: 419) argue that a crucial aspect of reflexivity involves researchers placing themselves with their background, their social and emotional history and their experiences in relation to the participants. Dowling (2008: 748) identifies this as a type of reflexivity in which the researcher "accepts the mutual give-and-take relationship that the researcher and participant enjoy … the researcher and participant cannot remain detached. A partnership is forged in the study and the researcher's experiences are used to interpret the data".

To become aware of subjectivity, the researcher had to engage in "internal processes" and support this by "external activities" (Probst & Berenson, in Probst, 2015: 38). These are both facets of reflexivity which involves a "self-examination (exploring one's assumptions, emotional reactions, cultural positioning) through specific actions (keeping a journal, debriefing with others, and so on) within a field of inquiry that is also an object of awareness" (Probst, 2015: 38). Probst describes the actions of the researcher very aptly:

> *Reflexive researchers are, in essence, gazing in two directions at the same time. As they attend to what is taking place in the field of study, they become aware of their own projections, attachments, assumptions, agendas, and biases—like an eye that sees itself while simultaneously seeing the world.* (Probst, 2015: 38)

In this section, the researcher provides a background and relevant information of herself together with biases that may have affected the study. The researcher is the deputy principal at a primary school and has 17 years of experience as a manager. Having been educated in a segregated education system, under the former House of Delegates, the researcher is grateful for democracy and the principles of equity in education but is not convinced that the present South African education system has succeeded in achieving the ideals that it has envisaged in levelling out the discrepancies caused by apartheid.

As an employee of the KZN DoE for the past thirty-four years, the researcher has experienced many curriculum changes since 1994. Although these experiences with curriculum change, especially the C2005 and OBE, have been challenging, each challenge has presented the researcher with an opportunity to develop and improve as an individual and also as an educator.

As a senior management member of one of the sites that is a part of this study, the researcher was responsible for managing the implementation of CAPS and the JiP at the site. During this process, there was resistance from educators in the implementation of change. The researcher had to come up with strategies to motivate and build a relationship of trust with the educators. The researcher is therefore able to identify with both the educators and managers in this study with the

implementation of the JiP. The researcher can therefore acknowledge that her experiences as an educator

, and thereafter as a manager, and with the implementation and management of change of JiP, are potential areas for researcher bias.

The researcher is also acquainted with some of the participants in the study at the school at which she is a manager and also with some participants at the other sites. This could also be a potential for bias.

The role of the researcher in this study was one of an observer-as-participant, and as such the researcher was the primary instrument of data collection in the study. Data from interviews, observations and documents were collected, analysed and interpreted by the researcher. In all of these activities, there was a potential for researcher bias, as the results could have been influenced by the researcher's experiences and interpretations. Additionally, the researcher had to constantly balance her role as manager/researcher.

While keeping track of these roles, being objective, non-judgemental in actions and perceptions was a challenge, the researcher made every attempt to ensure that these potential biases did not affect how questions were fielded and how she reacted to and interpreted the responses of participants.

The researcher ensured that the viewpoints presented on the implementation of the JiP where those of the participants and not hers by continuously reflecting on her position in the study. This was accomplished by maintaining a journal in which personal reactions to situations, past experiences (such as implementation of OBE) and preconceptions and biases were documented. Gearing, Starks and Trinidad, Creswell and Meyer in (Tufford & Newman, 2010: 83) refer to this process of self- reflection in which researchers acknowledge their biases, prior beliefs and perceptions on the phenomenon, and then set them aside so as to avoid them influencing their interpretations of data as "bracketing". The strategy of member checking also improved the credibility of the results by eliminating bias as discussed in 3.10. Every attempt has been made throughout the research process, from decisions on the research design, collection of data- especially during interviewing- to the data interpretation, to avoid bias.

3.12 SUMMARY

This chapter provides the reader with insights into the research design and methodology employed in answering the key research questions and accomplishing the objectives of this study. The choice of the qualitative research strategy over the quantitative is justified by providing the key features of the qualitative design that make it the design of choice. A multiple case study design together with the choice of three data collection instruments namely interviews, observation and document analysis allowed for triangulation of data and increased the credibility of the study. Other key principles of member checks, prolonged fieldwork, and comparison of cases together with reflexivity was also employed to improve trustworthiness of the study. By ensuring low risk to the participants, gaining access into the sites, obtaining the consent of participants and using pseudonyms to guarantee anonymity, the researcher ensured that the study was ethically sound. A discussion on how the data were analysed is also presented. The data and information collected at the research sites is presented and analysed in the next chapter.

CHAPTER 4

DATA PRESENTATION AND DISCUSSION

4.1 INTRODUCTION

In the preceding chapter, the researcher provided the rationale for the choice of the qualitative paradigm and the case study design, explicated the data collection instruments and data analysis procedures, and clarified the issues around ethics that were considered in the study. In this chapter the researcher presents the findings of the multi-case study which was developed by combining data obtained from semi-structured interviews with, educators, HoDs and principals on their experiences with the implementation of the Jika iMfundo Programme, classroom observation and document analysis.

Data analysis and interpretation are in response to the key research question: *What are the experiences of educators and managers with the implementation of the Jika iMfundo Programme?* More specifically, it sought to accomplish the following research objectives which includes determining the views of educators and managers on the initial information and training that they received in preparation for the implementation of the Jika iMfundo Programme; establishing how educators and managers are using the support material provided and looking at how adequate these are; establishing if educators and managers understand their roles in the JiP for ensuring effective curriculum coverage; revealing the challenges experienced by schools in the implementation of the JiP and finally assessing the effectiveness of the support provided to educators and schools in implementing any changes. The presentation and analysis of this data, followed by a concluding summary of the chapter.

4.2 PRESENTATION OF FINDINGS

The data collected through semi-structured interviews were triangulated with observation and document analysis conducted by the researcher. Data from the observation and document analysis were also compared to the interview data and allocated to the corresponding themes. This section presents the findings from interviews, document analysis and observations. The themes focus on the perspectives of the participants on curriculum change; how the participants were prepared for

the implementation of the JiP under study; the adequacy of the resources that were provided. Other themes are the roles of the participants in the implementation process; the adequacy of support that was afforded to them by the school and district for the successful implementation of the programme; the implications for teaching and learning and the sustainability of the programme.

Data analysis can be either descriptive, "what was actually said, documented or observed with nothing read into it and nothing assumed about it", or interpretive (Hancock, Ockleford & Windridge, 2009:24). The interpretive perspective is utilised in the discussions and interpretation of the findings, which are substantiated by direct quotes of the participants derived from the interview transcripts. According to the interpretative perspective the researcher or any observer and the world are viewed as a part of an activity or practice in the 'lived world'.

Morehouse (2012: np) and Hancock (1998: 7) concur that the interpretative researcher assumes an "insider role", where the researcher is a part of the process. This is in line with the constructivist paradigm which suggests that reality is created by the interactions of the researcher and the participants. During the process of analysis of the data, the accounts of the participants, are coded to uncover emergent themes and to make connections. Interpretation is a higher level of analysis which is concerned with making inferences from the responses of participants (Hancock, Ockleford & Windridge 2009:24). The purpose of research to the interpretive researcher is to share a description and interpretation of the phenomena to others (UKEssays, 2018: 5).

4.2.1 Preparation for the Implementation of the Jika iMfundo Programme

4.2.1.1 Initial Communication of Information to Educators on the Jika iMfundo Programme

From the study of literature on the implementation of change (cf. 2.2.7.4; 2.2.7.2), it became clear that for any change to be implemented successfully, there needs to be an initial provision of adequate and relevant information to the educators. Rogers (1983:6) refers to this process of communication, about the innovation to individuals in a system, as diffusion. Wilson (2015) calls this the "knowledge step", in which individuals within an organisation are informed and educated about the innovation, such as the reasons for and functions of the innovation. This can influence their attitudes in a favourable or unfavourable way. In order to determine the perceptions of educators on the information provided, they were asked how they received information on the JiP and if the information they received was meaningful and adequate.

The responses indicated that one way in which information on the JiP was disseminated to educators from the KZN DoE was through the principals of schools. Educators at two of the three schools indicated receiving some information from their principals who had attended the launch of the JiP. This information they stated was attained from a video that the principals were given at the launch. P2 and P3 were able to confirm that the JiP was launched by the MEC to which all principals in the district had been invited. The information that they received at the launch was then filtered down to their staff by them.

P2 commented as follows:

> *I received an invitation to attend the launch of the Jika iMfundo Programme from the KZN DBE via a circular. The MEC launched the programme and officials of PILO explained the programme to us. Once I got back to school, I informed my staff about the programme … they also gave us information about Jika iMfundo on a CD.*

P3 confirmed this information and added that the compact disc gave an introduction to the programme; discussed the slogan, "What I do matters"; and attempted to get all stakeholders to commit to the programme. Principals were required to use this CD to inform their staff about the programme.

Educators and HoDs at SCHA complained about the lack of initial information about the features of the programme and the reasons for its introduction as their principal had not attended the launch and was unable to give them much information. EDA2 stated that the principal was supposed to attend the launch of the JiP but did not and no one from the school replaced him. This information was corroborated by P1, who stated that although he wasn't available to attend the launch of the JiP due to his presence being required at a school function, he had acquired information from his colleagues, which he subsequently communicated to his staff.

The role of the media, such as the local newspaper and online news, in disseminating information to a wider range of readers was also inherent in the comment by HoD1 that since the principal was unable to provide clarity on the JiP, the only information she had was what she read in the local newspaper and through online news. The newspaper she stated provided information on the launch of the programme and that the JiP was going to improve the performance of learners at school in mathematics and other subjects. In addition, to information being circulated in the media, EDC2 confirmed that she found out about the JiP from DBE circulars. Educators were invited to JiT workshops via these circulars.

The DOI theory emphasises the role of the media and interpersonal contacts as communication channels that provide information to people (Rogers, 1986). According to that theory, these channels can also influence the decision of people to accept or reject an innovation. EDA1 maintained that she found out about the JiP from educators at other schools. Educators also found out about the JiP from their colleagues at other schools. EDC3, HoD3 and EDB1 found the information provided to them on the JiP to be inadequate. They recalled that they did not know exactly what the programme entailed and why it was being introduced.

The majority of educators and HoDs were unhappy with the manner in which they received information e.g. EDB1, EDA3 and HoD3 indicated a preference for written communication to them on changes in education, instead of the information being filtered down to them by principals. The present method results in information either being lost in transit or being misunderstood.

EDA3 commented:

> *The department must inform us first about changes instead of us reading about in the media after the launch*. (EDA3)

Likewise, participants at the other sites also expressed their dissatisfaction with the manner in which they were informed about the JiP. They indicated that they would have preferred to be informed in writing.

HoD1 also expressed frustration at the lack of consultation with educators by the DBE on educational changes, pointing out that the DBE needs to obtain the views of educators prior to developing and introducing change:

> *As always we are the last to find out about changes the Department makes in education…. they should have asked us for our thoughts on the programme or even for that matter informed us in writing about what was going on before the launch.* (HoD1)

The form of distribution of information in a 'top-down' manner led to some participants' initial confusion and scepticism, brought on by a lack of adequate knowledge. This lack of adequate information led to EDB1 believing that the JiP represented another change in the curriculum while EDC3 thought that the JiP was a revision to the CAPS curriculum.

Similar sentiments were reiterated by EDA3 and HoD3. HoD3 needed on information on the features of the programme.

> *We did not know much about the programme until we attended workshops and read the newspaper reports. I myself was very confused at first*. (EDA3)
>
> *The information did not completely make sense at that time … There was too much of information on supervision and tracking which left me confused.* (HoD3)

The provision of information by the KZN DoE to schools was intensified during the training workshops that were conducted for educators and managers. EDB2 averred that educators received more information on Jika iMfundo Programme at the workshops. It was at these workshops that they gradually began to understand the objectives and workings of the JiP as indicated by HoD2.

From this exchange with participants on the provision of information to them, prior to training, it became evident that information on the JiP was disseminated to educators and HoDs via school principals. This information was inadequate and led to confusion around the features and goals of the programme. Educators used the information from the printed and online news media and DBE circulars and interpersonal contacts to supplement their knowledge on the JiP. As promulgated by the DOI theory (Rogers, 1983), these communication channels provide information and influence the opinion and judgment of individuals to adopt or reject an innovation.

4.2.1.2 Adequacy of the Training

Research shows that educators need to be adequately prepared through activities to develop their skills, knowledge and collective effectiveness in order to improve their disposition, and to intrinsically motivate them to take ownership of and sustain the change (Eze, 2015;). Nzoka and Orodho (2014: 88) maintain that the continuous training of educators directly impacts student achievement. Arora (2010) observes that, although curriculum coverage is important for students, it is not enough to improve their achievement. It is important for teachers to receive ongoing support and training over the years on how to teach the topics that are in the curriculum. From the responses of participants at the three schools, it is clear that educators and managers were provided with opportunities to develop their knowledge and skills through workshops that were provided by the KZN DoE, in collaboration with PILO.

The majority of participants indicated that they were prepared for the implementation of the JiP through workshops provided by the KZN DoE. As shown in literature, this is the normal trend during innovation processes for education department officials to educate the change agents at

workshops on the intended change (Nzoka & Orodho, 2014: 88). However, not all educators attended these training sessions as indicated by EDB2:

> *I did not receive any training to implement Jika iMfundo because I'm teaching maths for the first time this year*. (EDB2)

This was due to the policy adopted at SCHB in which educators do not teach the same subject every year. HoD2 stated that subjects and grades are rotated annually. SCHB therefore, ended up with a situation where new mathematics teachers are implementing the JiP without any training. SCHA and SCHB also had new educators who had not been trained. P1 and P2 were therefore, of the opinion that training should be provided more than once a year. Furthermore, not all educators in the mathematics department at schools were able to attend these sessions as these were held during school hours. Some principals were reluctant to release all the mathematics educators as this would create a problem with staffing at schools. They chose to release one senior teacher from the phase who was tasked to attend and provided feedback to other educators at school. This is reflected in the following statement:

> *The principal did not want to send all the maths teachers to the workshops because there would be a problem at school with relief ... a senior teacher in the phase went and then reported back at the subject committee meeting,* confirmed EDC3.

Not all educators according to HoD1and HoD2 were able to attend the JiT workshops. Just one HoD and the grade head were sent by the school the HoD clarified. HoDs 1,2 and 3 explained that they had to train the other teachers when they got back to school. HoDs did not agree with this method of training. HoD2 proposed that the training of all educators and not just the HoD and one educator as they experienced difficulties in providing training to the other educators in their department when they returned to school.

From these responses, it is evident that the 'training-of-trainer' approach was adopted (UNEP, 2006). For the educators who did not attend workshops, the arrangement was that the information would be conveyed to them through feedback meetings that were to be conducted at schools. PILO officials had trained the district officials, who in turn trained the HoDs, to go back to schools and train their educators (Metcalfe, 2017).

Research shows that this approach to training large numbers of people is favoured as it can become problematic logistically for policy makers from either the national or provincial departments to train all educators, so they train groups of professionals to provide training to the masses (UNEP,

2006). However, the training needs to be effective so that the facilitators are well equipped to provide accurate information and be in a position to answer questions fielded to them by the educators. This method also puts an added burden on HoDs who are already overwhelmed with their increased workload, to prepare and present training to educators at schools.

Information about workshops were not clearly communicated to schools. The following comment was indicative of this:

> *On one occasion I was asked to attend a workshop by my HoD. One educator per grade was selected. I do grade 6 maths so I obviously had to attend. When I got to the workshop, I was embarrassed by the facilitator who told me very rudely that the workshop was for HoDs. Quite a few educators were at the workshop besides me. So we stayed on till the end. When I returned to school, I asked my HoD why she gave me the wrong information. The HoD showed me the copy of the invite where it stated that the workshop was for educators*. (EDA2)

This statement shows that there was miscommunication between the organisers of workshops and subject advisors who were the facilitators. This led to awkward situations at workshops which left educators feeling demotivated and embarrassed. It also speaks to the poor and unprofessional treatment of educators who are the people tasked to implement change in the classroom. These are the individuals that need motivation, support and encouragement to buy into the change.

Educators were unclear about the frequency of the workshops. According to the majority of participants, the workshops were conducted annually from the inception of the programme in 2014. While EDC3 recalled having attended one workshop in a year, EDB3 and HoD3 alluded to the fact that workshops were initially held once per quarter and was then reduced to annually. Their comments were:

> *After the introduction of the programme, they see to it that our needs are catered for by organising workshops once a quarter which enable us to manage this programme appropriately.* (EDB3)

> *We attended workshops that were provided by the department. Once a term initially. Then the following year it become once for the whole year*. (HoD3)

Educators indicated a need for workshops to be held more often, as there were educators who did not know basic mathematics concepts. Educators comments on the number of workshops was not consistent with literature (Metcalfe, 2018: 60) on the training provided which asserts that the JiT and SMT workshops were held in the first three terms of each year from 2015 to 2017. The HoDs attended two SMT sessions a year for the three years, one of which was with the principal/deputy

principal. The principals/deputy principals attended two SMT training sessions a year for three years, one of which was with the HoDs (Ibid.).

The training of educators, according to EDB1, focused on informing and educating participants on the reasons for the JiP, of its focus on improving curriculum coverage through the provision of resources and training to improve their capacity to teach the mathematics content.

EDA1 stated that educators were developed in teaching various topics in mathematics. The participant went on to explain that this was done by getting educators to make presentations on how they would teach certain topics. They learned from each other and the subject advisor. In addition to this, EDA2 and EDC3 observed that educators were trained on how to plan and track curriculum coverage by using the teacher toolkit. This however was not the view of all participants. While some educators found these training workshops to be "well organised*"* and "effectively facilitated" by subject advisors who possessed "good content knowledge", a small number claimed that facilitators were "not adequately prepared".

The majority of participants reported being "active participants" at the training workshops, where they worked in groups and conducted presentations, as indicated by EDB3:

> *I was an active participant. We had group discussions and we gave feedback to the other educators,* others reported that they were *mere observers* who had to *listen and implement*. (EDB3)

HoDs had divergent views about the adequacy of the JiT workshops. HoDs and grade heads attended JiT training. As reported by the KZN DoE (2015), these sessions led by the subject advisers were attended by more than 4 000 heads of department in Term 1 of 2015. The HoDs reported having to attend workshops and they were required to provide feedback to and train the educators at school on how to implement the JiP. HoD2 was extremely satisfied with the training provided and expressed delight for the support provided by the programme in terms of the supervision tools provided. HoD2 also thought that the facilitation was good and members were involved group activities. The following comment is indicative of this:

> *The JiT workshops were very good. The training we received was on how to use the supervision tools. We were excited about the new programme especially for the support we were receiving with the tools … the facilitators were very good … there was a lot of discussion and group activities.* (HoD2)

While HoD1 was in agreement with HoD2 with regards to the adequacy of the training, HoD3 had a divergent view. HoD3 averred that although the workshops were very informative, the subject advisors who facilitated the workshops were unable to answer some of the more pressing questions to which they needed solutions. HoD3 commented:

> *Facilitators just read from materials provided to educators … unable to answer questions. So I didn't know how to deal with urgent problems we were having at school.* (HoD3)

This lack of proper answers to implementation issues HoD3 went on to say, led to uncertainty at the SCHC in the implementation process. An example of a problem the HoD gave was on the pace of the tracker. They did not know what to do if learners were unable to understand a particular aspect taught because they had to follow the time frames given, she said.

School managers indicated having attended training in instructional leadership and management, which was provided by PILO (Programme to Improve Learning Outcomes) officials. This is consistent with a report by MEC Peggy Nkonyeni that the district-led training of school management was well received by the more than 3 000 SMT members who attended module 1 of the training in term 1 (KZN Government, 2015). Principals were pleased with the training provided in terms of the facilitation and the number of workshops held. They also agreed that the content and resources provided at these workshops were beneficial for the implementation of the JiP and in managing the curriculum at school. These are some of their comments:

> *I enjoyed the workshops that I attended … the facilitators were from PILO…gave us training manuals which are very informative and helpful for managers.* (P2)
>
> *The workshops were very informative and enabled me to carry out my duties more effectively … The facilitators were very well versed on the subject matter and involved the attendees in a number of activities that mirrored real life situations … We completed the four modules and thereafter there weren't any follow-up workshops*. (P1)

Although P3 confirmed that the workshops provided to principals were beneficial in managing the curriculum, and the resources provided were helpful for future reference she deemed the training provided to educators to be inadequate in terms of quality and quantity. Her statement alludes to this:

> *Training was adequate for us principals but not for educators. The workshops were rushed and not as many as we principals had.* (P3)

The views provided, clearly expressed the need of educators for more training on implementing the programme and on dealing with practical issues at ground level. Participants drew attention to the practicalities of having all mathematics educators in a particular school phase attend workshops during lesson time. This is another example where educators were not satisfied with the way the information on JiP was disseminated to them. Flores (2005: 403) points out that although teachers (seen as curriculum developers) have been dealing with greater responsibilities and demands, the training and support provided to them are far from being responsive to their needs.

4.2.2. Views of Educators and Managers on Changes in Education

One of the main aims of the study was to determine the educators' views and experiences of the implementation of the JiP. These, whether negative or positive, would have far reaching consequences on the implementation process, practice and whether educators would be able to sustain the change brought about by the programme or not. It is important to understand the views of educators on educational change, as they are the key stakeholders responsible for the successful implementation of change in the classroom. According to the DOI theory, peoples' views on change are informed by whether they view the change as beneficial and advantageous (Rogers, 1983; Yocco, 2015). As part of an introduction to this theme, educators were asked questions that pertained to their views on changes in education. As educators are individuals, it will be realistic to assume that they would have differing views on change. In general, the data revealed that participants have mixed emotions on curriculum change and innovations. There were both positive and negative feelings expressed about educational change.

The majority of the participants (educators, HoDs and principals) viewed change favourably, indicating that they did not have a problem with educational change, as long as it was "beneficial to learners and educators alike". They also felt that change is something that is "unavoidable and necessary at times" as the education sector needs to keep pace with the changes in society. Change is seen as a necessary part of development and improvement but it needs to be "minimised" and only implemented when absolutely inevitable.

These were some of the comments:

> *We cannot avoid change, it is unavoidable, but we must make sure that it is minimised and restricted to times when new knowledge and skills has to be learned*. (P1)

> *Change is very important especially with regards to education. The relevance of education and technological advancement is always necessary.* (P2)

> *Educational change is important in this fast-changing world of the 21st century. The change will accommodate the growing needs of our technological era and challenges that we face*. (HoD2)

EDA2 viewed change in education as good, if it is absolutely necessary and not disruptive. Too many changes and disruptions she believed affected the "value and culture of education". Other participants viewed change in a negative light, seeing it as "disruptive, unnecessary, frustrating" and many were indignant about the lack of consultation on change efforts in South African education.

> *There have to been too many changes in education in South Africa since 1994. One must realise that these changes disrupt the educators, learners and the schools. This can be very frustrating for educators especially if they cannot see the need for change.* (EDA3)

> *Educators need to be involved more in curriculum development instead of changes made by developers and educators just expected to carry out the curriculum.* (EDC1)

The responses above indicate a negative attitude of participants towards change. These feelings stem from a lack of consultation by the DoE with educators on changes that have been implemented in South African schools since 1994. Furthermore, these changes were brought on in quick succession and have left educators and managers feeling frustrated. P3 felt that changes were too frequent and they were brought about without involvement of educators and without the department officials providing support to educators. Besides having too many changes in education, EDC3 was of the opinion that some of these changes were "unnecessary". There were others that were ambivalent about change, believing that "good change is needed", but they were critical of the present curriculum and the education system in general. The following comment is an example of one such view.

> *I do not think we have the right curriculum and the educational system on the whole is lacking and not meeting the needs of learners*. (EDB1)

Although the above comment does not represent the feelings of all educators, it shows the lack of faith in the education system more especially the present curriculum in meeting the needs of learners.

On the whole, educators and managers' stances that educational change is inevitable at times is consistent with Amimo's (2009) contention that the curriculum needs to continuously evolve to accommodate the changing needs in society. They are of the opinion however that minimal necessary change is advisable compared to change that is unnecessary and disruptive.

4.2.3. Views of Educators and Managers on the Jika iMfundo Programme

Educators' views on the JiP were inconsistent within and across schools, showing that people interpret the same information very differently. This is consistent with the constructivist paradigm, according to which, knowledge is both a mental and a social process, where people form meanings from their experiences (Creswell, 2014).

The majority of participants conveyed positive emotions about the JiP. They understood the JiP to be a programme designed to help educators to track curriculum coverage. This is concomitant with literature, which states that JiP is the KZN DBE's "radical education transformation initiative" to support educators and managers to track curriculum coverage by learners (Mahlambi, 2014: 1). However, the initial perception by many of the participants before training on the JiP was very different. They viewed the JiP as a new curriculum or a revision of the CAPS. This was due to the lack of proper initial communication of information on the JiP. The change in attitude only came with the provision of more information at workshops and clarification about the programme by the SMT at meetings at schools. EDA3 explained her change in attitude:

> *The SMT explained to us at workshops that the programme is meant to provide us with tools to make sure that we covered the CAPS curriculum properly.* (EDA3)

Wilson (2015: 1) states that people form either a favourable or unfavourable attitude about change depending on the information that is communicated to them about the innovation.

The purpose of the JiP, according to the educators and managers is to assist educators in the teaching of the CAPS curriculum by breaking down the content and also by providing them with lesson plans. EDA1 averred that the CAPS content is extensive and educators had difficulty in completing it. This was further compounded by the fact that learners were slow in comprehending the content. This is clearly evident in the following statement by EDA1:

> *When CAPS was first introduced, we struggled to finish the syllabus … the content was too much ... children could not understand the content so it takes long to teach them … Now with Jika at least they break the work down for us. They also give us preps to help us teach.* (EDA1)

Educators and managers welcomed JiP as a programme that would assist educators in the teaching of mathematics. EDB2 listed the provision of resources such as the toolkit as useful, as it provides educators with clear guidelines on the topics to be covered, as per CAPS, and enables structured lesson delivery with the use of a tracker. EDC1 argued that in addition to the support provided to teachers of mathematics in the form of training and resources, the JiP also contributed to their increased confidence in teaching the subject. Some comments were:

> *With Jika the educators have toolkits and learners have workbooks. This gives educators more confidence to teach the subject especially for those who are new in the field.* (EDC1)

> *Jika iMfundo helps educators to cover the curriculum within the specified time frames and HoDs have tools to supervise curriculum coverage … the main aspect of Jika iMfundo is for HoDs to have one-on-one meetings with educators to discuss curriculum coverage.* (HoD2)

HoD2's comment is also reflective of similar comments by HoD1 and HoD3 who viewed the JiP as a programme that supports educators cover the curriculum adequately and within the school terms and provides supervisors with tools to supervise curriculum coverage. HoD2 also highlighted one-on-one curriculum conversations as the key feature of the JiP for managing curriculum coverage.

KZN DoE's decision to introduce the JiP was applauded by the majority of the managers who considered the programme as a necessity for schools to manage the curriculum efficiently, and to address the challenges facing curriculum delivery. The following comments are indicative of this:

> *The department's decision to pilot the Jika iMfundo at schools in the two districts was necessary because some schools were not completing the curriculum for the year. Jika iMfundo is focused on helping the educators and the SMT to make sure the curriculum is covered. They also want the SMT to monitor the curriculum coverage and support the educators through one-on-one meetings, because educators need assistance with managing the completion of the curriculum.* (P1)

> *I agree with the department's decision to introduce Jika iMfundo. The CAPS document is just too thick and too much to read. The Jika iMfundo Programme makes it so much easier to use.* (HoD3)

While participants at both SCHA and SCHB viewed JiP as a programme that was introduced by the KZN DoE to assist educators cover the CAPS curriculum adequately, at SCHC the participants

ranging from the educators to the SMT all believed that the JiP was introduced as an addition to CAPS.

> *It is good that the department introduce Jika iMfundo as it allows the educators to use a variety of teaching methods in the teaching of the CAPS curriculum. Jika iMfundo becomes supplementary.* (P3)

Not all educators are in favour of the JiP. EDB1 complained about the pace of the programme being too fast and this the participant argued was compounded by absenteeism and disruptions for school activities. EDC2 on the other hand, saw no need for the JiP. These were their comments:

> *Concerning Jika iMfundo we are on the fast line. We are always rushing to keep up with curriculum coverage … It's worse if we get absent or there's an interruption for sports or other activities … it's too stressful.* (EDB1).

> *I think educators must have a say in whatever programme is implemented. I don't see the need for Jika iMfundo*. (EDC2)

The above statement by EDB1 reflects the views of many FP educators who consider the pace of the JiP to be too fast, thereby placing undue pressure on educators to keep up. Furthermore, the lack of involvement of educators in the development of the programme, as led to a lack of support for the programme by some educators. Essentially, however, the majority of participants were positive about the JiP. They saw it as a programme that is supporting educators and managers with resources and training to cover the mathematics curriculum effectively.

4.2.4 Implications of JiP for Teaching and Learning

4.2.4.1 Planning, Tracking and Monitoring Curriculum Coverage

a. Lesson planning and delivery

A policy change or an amendment in existing activities/methods in education necessitates a behavioural change and a change in the belief systems of educators. Educators have to learn new behaviours and new ways of thinking. This is imperative as educators' resistance to change is identified as the leading obstacle to curriculum change (Mâţă, 2012: 512). Anderson, (2010: 77) makes a distinction between the change that defines existing practice, replaces existing practice or adds new practices to existing patterns of work, as is the case with JiP. For educators, the implications of the JiP were on improving existing practices in lesson preparation, curriculum delivery and coverage.

The implications for teaching, according to most educators, was on assisting them in covering the mathematics curriculum adequately and effectively. Educators are required to teach according to the lesson plans that are provided, reflect on the lessons and track their curriculum coverage. They are required to follow the curriculum tracker to maintain the pace of the curriculum. The provision of the lesson plans and tracker, assists them to plan lessons, and teach the content properly and makes their job of teaching easier. In addition to proper tracking of the curriculum and better curriculum coverage P2 averred that areas of weakness could also be identified.

Educators have been provided the resources such as the curriculum tracker and planner, lesson plans and exemplars, to ensure that the curriculum is covered for the year.

EDB3 confirmed the particular advantage of JiP for curriculum coverage:

> *We follow lessons indicated in the teacher resource book together with learners' workbooks, four days a week for curriculum coverage. The fifth day we do re-cap and reinforcement work for slow learners. Homework is given to learners every day except for the fifth day.* (EDB3)

This statement suggests that the resources provided are used in planning, teaching, assessing and reinforcing learning. The JiP according to the statement by EDB3 gives the educator clear guidelines on how to cover the curriculum.

Educators had divergent views on the implications of the JiP for learners. "No learner," according to EDB2, "should be left behind because of an incomplete curriculum". The participant went on to clarify that all learners now have equal opportunities to learn. EDA1 shared this sentiment stating that learners were given many opportunities throughout the year to consolidate their knowledge. This view, however, was not shared by EDB3, who felt that learners are not given enough time to grasp the concepts adequately before moving on to other sections.

The findings reveal that the majority educators believe that the JiP has positive implications for lesson planning and delivery. Educators have been provided with resources such as lesson plans, a tracker and exemplars to plan adequately. They are able to track their curriculum coverage using the tracker as they are provided with clear guidelines. While some educators consider the JiP to accommodating of all learners by providing a day for consolidation, others feel that slow learners are unable to keep up with the pace.

b. Supervision of Curriculum coverage

One of the key practices identified by PILO, that is required for an improvement in curriculum coverage and subsequently in learning outcomes, is for HoDs to "regularly check teachers' curriculum tracking and learners' work, work with teachers to improve coverage and assist

teachers with problems in relation to curriculum coverage" (Metcalfe, 2017: 22). With the implementation of JiP, HoDs are required to use the supervision tools that are provided by the programme to supervise and monitor the curriculum delivery by educators and the coverage by learners.

SMTs indicated that prior to the JiP they were already supervising the work of educators and monitoring the curriculum coverage by learners. They had their own curriculum management plans in place. HoD1 was of the opinion that they were already managing the curriculum in our own ways but they had to change and use different JiP tools and instruments. HoD1 argued that this led to them having more administration work. The other two HoDs welcomed the standardised supervision tools as it made their task of supervising easier since they do not have to create their own instruments.

HoDs are also required to be supportive in their roles and conduct development meetings with educators. It is a requirement of the JiP that HoDs and educators have more curriculum conversations.

HoD1 said:

> *The problem is that there's not enough time in the school day to hold all these meetings. I teach almost the same as level 1 educators and there are too many teachers and subjects to supervise … I discuss curriculum coverage at subject and phase meetings.* (HoD1)

Despite the heavy workload, HoD2 felt strongly that the JiP was assisting in ensuring curriculum coverage by educators.

> *With Jika iMfundo the HoD must make sure the teachers are covering all the content for maths which is good. We do class visits, check the learners' written work … we also moderate all the assessment before and after … The HoD has a lot of admin work to do. We must make a management plan first and after the audits, we must do one-on-one meetings. The time is not enough at school.* (HoD2)

The responses of the HoDs provides insights into their supervision tasks which include ensuring curriculum coverage by conducting lesson observations, supervision of learners' books and controlling all assessments. HoDs are finding it difficult to juggle the supervision, administration and teaching duties in the limited time at school. HoDs have indicated that many of their tasks are completed at home in their personal time.

With the JiP, HoDs are not forced to use the tools that are provided. They may adapt them, as was done by two of the three schools, or they may use their own tools (Metcalfe, 2014: 42). HoDs found the tools to be *very* useful as they provide evidence that may be utilised to conduct

conversations around curriculum coverage. The only aspect of JiP that is a non-negotiable, as stated in literature (Metcalfe, 2018) is the curriculum conversations between educators and HoDs and HoDs and principals/deputy principals. The JiP is built on the theory that if curriculum coverage improves, it will lead to the improvement in learning outcomes (Sayo, 2016). HoDs were in agreement that the JiP assists in improving curriculum coverage.

4.2.5 Implementation of Jika iMfundo

4.2.5.1 Process of Implementation at Schools

a. Staff meetings and workshops

A similar approach to the implementation of the JiP was followed at all three schools but each school is progressing at their own pace. The implementation process involved educators being appraised of the programme at meetings conducted by the education department and the school. P1 declared that information about the JiP was circulated to schools and that workshops were provided to SMT and educators. The responsibility for communicating information on the JiP with regards to what educators are to do, was on the SMT indicated EDC2.

This was done at phase and staff meetings she went on to clarify, as did EDA3 and EDB1, as indicated in their responses:

> *We also had workshops at school and the HoDs discuss Jika iMfundo at the phase and subject committee meetings.* (EDA3)

> *Meetings were held to brief the staff on how to use the Jika iMfundo Programme. The HoDs also held phase meetings to workshop us.* (EDB1)

HoD1 confirmed that although HoDs were initially unsure about the programme, they had to return to school after their training provided by the DoE and workshop the educators. HoD2 and HoD3 also collaborated this information. The responses from educators and principals highlighted the critical role played by the HoD in the dissemination of information to educators. This is reinforced in the statement by P2:

> *The educators were trained by the HoDs. They were motivated and needed to buy into the approach because at first, they were not very happy. Now we are using Jika iMfundo fully to track and supervise the curriculum.* (P2)

The comment by P2 not only testifies to the training provided but also highlights the important role of a HoD in providing this ongoing training and support to educators at school level.

Furthermore, it is indicative of the fact that educators do not accept change without motivation, as confirmed by HoD1*:*

> *When Jika iMfundo was first introduced to our school, the teachers were very upset because they are tired of change … Also, for us HoDs.* (HoD1)

Schools have implemented the JiP after receiving training from the KZN DoE. The SMT, more especially the HoDs provided training to educators at meetings and through workshops at school. Not all educators were supportive of the programme at the initial stages. They had to receive adequate information through training and thereby were motivated to implement the changes in their activities around curriculum coverage.

b. Provision of resources

The implementation of the JiP at schools involved the managers distributing the resources provided by the KZN DoE to educators. Principals indicated that they had circulated the DBE correspondence on the implementation of the JiP and dates of workshops to educators. The HoDs affirmed that the resources such as the toolkits and workbooks were distributed to educators for use in the classroom.

> *Our SMT trained us on Jika iMfundo once … they gave us the teacher toolkits, dictionaries, learner activity books and a tracker and we follow the lesson plans.* (EDC1)

> *HoDs had to workshop educators after attending workshops, distribute all resources for the programme, assist and ensure that all educators were following the programme and monitor the trackers.* (HoD3)

According to EDC2 educators at SCHC were trained at a workshop once, given the necessary resources to implement the programme and left to make sense of the material by themselves:

> *We had to read the information from the handout and follow what you are told to do.* (EDC2)

At SCHB, the HoD followed the example of the curriculum planners and trackers and devised trackers for all subjects. These were also given to educators to support them in curriculum coverage. HoD2 elaborated:

> *The documentation that was provided was appraised and curriculum coverage is tracked by the HoD, DP and Principal. Trackers were prepared for all subjects from grades 4 – 7 excluding mathematics which was provided to us by the Department.* (HoD2)

In order to implement any change, educators will need adequate resources (cf. 2.2.6.3). The resources needed for the implementation of the JiP were distributed to educators by the HoDs and principals. These included circulars, toolkits and workbooks. The manner in which this was done was different at each of the schools. While some schools receive ongoing support in terms of resources and training others received training once and thereafter had to manage on their own.

c. Reflection

According to the theory of action, for people to achieve the best learning, they need to complete a cycle of action, reflection, inquiry, evidence (cf. 2.2.7.3). Responses provided by principals, indicate that schools are also reflecting on the implementation process and addressing some of the challenges that educators were experiencing. This is done at staff, subject and phase meetings. P3 confirmed that he together with his HoDs, discuss problems at phase and staff meetings. P2 suggested that reflection plays an important part during any change effort in order to address the problems faced by educators and to find solutions. P1 confirmed that the *SMTs monitor the progress with implementation and manage the curriculum with the use of the supervision tools*. According to EDB1, HoD1, EDC2 and EDA1, the information obtained from the supervision is used to reflect on how the JiP is being implemented. Specific areas that reflection is conducted on is on how the educators are tracking curriculum coverage as indicated in the following comment:

> *At the end of the term these booklets or trackers are checked by the HoDs to see how we cover the curriculum and what problems we are having.* (EDB1)

From their reflection, educators and managers pointed out that the implementation of the JiP was progressing well despite the challenges that they have faced. Participants at SCHA pointed out that the JiP has become a daily routine in planning. The comment by EDA1 attests to this:

> *We implemented Jika iMfundo in 2015 when it was introduced … at first we had some problems but the HoDs participated in workshops and subject committee meetings to help those with problems. Now we use Jika iMfundo to do our lesson preps and assessments. We don't even think of it as being something different. It's like we were always doing it.* (EDA1)

Most of the educators, ie. EDB3, EDC3, EDA2, suggested that reflection was an important aspect of their daily practice. They stated that they had to reflect on aspects of their lessons that were going well and areas that needed attention and on how they are progressing with regards to curriculum coverage. Analysis of the curriculum tracker shows a section that educators have to

complete called reflection. educators are required to reflect on their curriculum coverage by identifying aspects that were working and those that weren't. HoDs stated that the evidence from educators' reflections in their curriculum trackers, provide evidence for their curriculum conversations. In addition to the views that reflection is important, some educators (EDB2 and EDC1) stated that the completion of the reflection was time consuming and led to additional administration work.

Reflective action involves thinking creatively and intelligently. Fullan states that it is not what we learn by doing but what we learn by thinking when we are doing (Fullan, 2006: 10). The theory proposes that people learn best through a cycle of action, reflection, inquiry, evidence, action and so on. In the context of the implementation of the JiP this entails the educators reflecting on their teaching, to see what is working and what needs attention.

From the responses above it is evident that most participants consider reflection on the implementation of the JiP to be important. The HoDs supervision tools and trackers provide the evidence for reflection on what is working and what is not when it comes to curriculum coverage. Some educators feel that reflection adds to their administrative duties and takes up a lot of time. It is probably the reason for the findings from the analysis of educator's preparation files where it emerged that the part of the lesson preparation that requires educators to reflect on their lessons, is not filled in consistently. While on some lesson plans, the reflection is filled in, it is omitted in others. The analysis of the curriculum tracker also revealed that the details of the reflection done by some educators is sometimes very superficial. Precise details on the aspects that need attention is lacking.

d. Monitoring the implementation of the JiP

According to P1, and HoD1 educators at SCHA had experienced problems initially but have since become aware of their roles and how to utilise the Jika iMfundo Programme resources. There are systems and structures in place at SCHA for monitoring the progress in implementation, as captured in this statement. Educators at SCHA are aware of the requirements of the JiP. They have been appraised of how to plan and track curriculum coverage by the SMT. The HoDs have meetings at which the educators are provided with support and feedback. The SMT have a written schedule for the aspects and dates for monitoring of the progress with the implementation of the JiP. The following aspects are evidence of proper implementation: adequate planning and tracking of curriculum coverage, completion of activities and assessments by learners as per the tracker

and the use of effective teaching strategies. These are monitored by the HoD during the scheduled supervision activities. These are some comments by P1 and HoD1.

> *My educators know what is expected of them when it comes to Jika iMfundo. They use the teacher toolkit to plan their lessons and to track coverage of the curriculum. The SMT have procedures in place to supervise the work they are doing.* (P1)

> *It took some time but now the teachers use Jika iMfundo to prepare their lessons and their assessments ... They use the curriculum tracker to record as they complete their content … I would say we are moving along nicely*. (HoD1)

The progress with the implementation of the JiP is also monitored by the SMT at SCHB. The educators have embraced the practices of the JiP and are following it consistently as stated by EDB2:

> *My school follows this programme faithfully.* (EDB2)

Although educators at SCHB initially experienced problems with the implementation of the JiP, they have adopted the changes into their practice of tracking and supervising curriculum coverage.

The following comment by P2 alludes to this:

> *They were motivated and needed to buy into the approach because at first, they were not very happy. Now we are using Jika iMfundo fully to track and supervise the curriculum.* (P2)

From the researcher's analysis of educator files and HoD supervision files, at SCHA and SCHB, it is evident that JiP is being properly implemented by educators and managers in the teaching and supervision of mathematics, in the foundation, intermediate and senior phases. HoDs have evidence of curriculum supervision in their files. Lessons plans provided by department are available in the educators' files, their trackers are completed adequately (adjustments are made to facilitate other school activities and educator absenteeism), exemplars are used for tests and assessments and the files are well maintained. Participants indicated a commitment to the change process.

Monitoring of the implementation of JiP at SCHC is accomplished by supervising the activities such as planning, teaching and tracking that educators engage in.

This is done effectively in the FP since the JiP is implemented strictly in this phase and not in the InterSen as indicated by P3 and EDC3.

> *Resources are provided to educators but the programme is used as an addition to CAPS programme. It is used as backup resources*. (P3)

> *We use it in conjunction with CAPS in the Senior Phase. We try to keep with planning and tracking but we do not follow it strictly. It is additional.* (EDC3)

The resources and practices are not used consistently in the InterSen. In the FP, the HoD checks if educators are planning and tracking according to the JiP, while in the InterSen, they make use of the resources if they wish to. While some educators use the lesson plans provided, others are still using their old lesson plans and track curriculum coverage by dating their annual teaching plans (ATP). Basically, educators have the option of using the programme or not. So there is a lack of consistency in the InterSen.

Anderson (2010) argued that for implementation to be successful, quality attention must be given to cultivating the proper conditions and activities during the process. From the study, it is apparent that at two of the three schools, the principals and HoDs, have created a conducive climate for change to be implemented, by communicating information on the innovation, providing opportunities for development and making the resources available for implementation.

4.2.5.2 Challenges Experienced in the Implementation of Jika iMfundo

Change is a difficult process in which people normally experience challenges and obstacles (Govender, 2013; Maharajh, Nkosi & Mkhize, 2016; Tan & Talaue, 2013). As stated previously, the JiP was developed and piloted without the input of educators, so, it was not a surprise to the researcher that the participants reported experiencing challenges. A study conducted by Thompson, Bell, Andreae and Robins (2013: 3) found that while the educators are generally well motivated, many of them re-count a number of roadblocks to the implementation of change. Similarly, most of the participants experienced challenges in the implementation of the JiP. While some of these challenges were common at all sites, some were more individualised.

a. Increased administration tasks

Educators indicated that the increase in administrative duties brought on by the JiP represented a challenge. Educators reported that lessons had to be prepared in accordance with the planner. Lesson plans had to be adjusted to take into account the duration of lessons at schools. Marking

of workbooks, homework and classwork has become a challenge with the great increase in the class sizes in South African schools. Even HoDs complained of the added administrative duties administration of the supervision tools was time consuming. The following comments reflect the challenge of increased workload to educators and HoDs.

> *Completing of the trackers and reflection at the end of the lessons is time consuming.* (EDC3)

> *The administration work is too much. The HoDs have too much to do with teaching and tracking the curriculum and supervision. Also, some educators have a problem with class visits and criticism of their work. They feel that they have experience in teaching and shouldn't be told how to do their work … There is also not enough time to monitor the teacher's work and for training of educators. (HoD3)*

HoD2 also clarified that some other changes had to be made to implement the JiP which resulted in an increased workload.

HoD2 stated:

> *We needed to adjust times with regards to the completion of tasks or activities in other words the content in line with the tracker.*

Priestley and Sime (2005: 489) assert that it should be understood that changes place undue pressure on educators. They have limited time and resources to make sense of any new content, insufficient training to implement changes, and suffer additional administrative work and lack of effective management. Participants' views on the JiP also extended to the implications of it on their workload. From the responses, it was evident that there are discrepancies in participants' views on the impact of JiP on their administrative duties. Most of the participants were of the view that by providing them with resources, such as lesson plans, JiP had in fact decreased their workload. They did not have to do much research, as this has already been done for them, and the resource templates are provided or a list of required resources are given. Educators EDA1, EDA2, EDA3, EDB1, EDB2 and EDC2 experienced a reduction in their workload brought on by the provision of lesson plans and exemplars.

EDA1 said:

> *I would say that my workload has been reduced because I don't have to go and do a lot of research for preparation. I use the lesson plans that are given and they are easy to use and understand ... Even the assessments are given. This makes life simpler for teachers.*

In contrast, others, like EDB3 and EDC2, felt the programme increased their workload by requiring them to continuously track their curriculum coverage, reflect on their teaching, assess learners and mark additional books. They found this to be time consuming and stressful. This is reflected in the following comments:

> *…even though the planner is given it does not mean we have less work. Now we have more books to mark, like the workbook and the classwork book plus homework. We also need to enter dates in the tracker and reflect on our teaching. There just isn't enough time to do all this.* (EDB3)

EDC1 also claimed that there is an increase in marking brought on by the provision of Jika iMfundo Programme workbooks and the DBE workbooks and textbooks also led to additional marking for educators as they did activities from all three and had to mark these as well. EDC2 found that the need to redo lessons plans according to the planners had resulted in her having additional work to do.

> *Although we have curriculum planners and trackers, we still have to do our own preparation and use the Jika lesson plans as a resource.* (EDC2)

These findings are consistent with literature which indicates that the implementation of change implies that the implementers have an increase in administrative tasks as change implies new ways of doing things (Priestley & Sime, 2005). Likewise, Sloan (in Lingam, Lingam & Sharma, 2017: 21) suggests that the increase in schools' expectations brought on by changes have inadvertently necessitated an increase in the work of teachers, particularly with regards to responsibility and accountability.

b. Large classes

The increase in the school population has become a challenge at schools since, according to HoD1 and EDA2. Educators are struggling to manage discipline in the classroom because of the large numbers and this puts pressure on them to complete the content stated EDA2. Furthermore, EDA2 and EDC3 averred that educators are unable to provide individualised attention to learners who are struggling to keep up with the curriculum due to the large number of learners in a class. HoD1 also stated that having 45 learners in grade one was not conducive to teaching and learning. The learners she went on to explain had problems understanding the content but they could not be adequately assisted by their teachers because of the time constraints and large numbers. EDA2

also mentioned that large numbers of learners in a class also leads to an increase in the workload as educators have to mark more books, and assessments.

c. Lack of interest and poor learner discipline

Lack of interest and motivation among learners according to some participants is affecting curriculum coverage. EDA2 explained how managing discipline during a lesson is time consuming and leaves the teacher with less time to complete the content. This in turn leads to educator stress.

EDA2 commented:

> *The behaviour of our learners is getting worse every year. It takes so much of time to settle them down before starting the lesson. We have to stop teaching at regular intervals to discipline learners and record demerits. Then there's so much of content to finish in a period or a term. It becomes very stressful.* (EDA2)

EDA3, EDB1 and HoD3 also mentioned that learners show a lack of interest in their work. They confirmed that most learners do not complete homework activities and do not study for tests and examinations. EDB1 stated that learners rely only on what is taught in the classroom.

The following is an example of a response:

> *The learners do not do their homework or complete their class activities. Learners do not prepare in advance or study for tests and exams*. (EDA3)

The lack of interest of learners and their poor discipline is listed as a challenge to educators in the implementation of the JiP. Educators are required to complete the content in specified time frames but the failure of learners to complete homework activities and study for tests and examinations is resulting in poor performance. Administration of policies with regard to the management of discipline in the classroom, is also

d. Educators' resistance to change

Both P1 and P2 named educator resistance to change as a challenge.

P2 revealed:

> *Educators needed to have a change of mindset.* (P2).

However, P1 averred that educators were wary of change because of its implications for them.

P1 commented:

> *We have a few challenges in implementing Jika iMfundo. Educators were wary of the change at the beginning which is normal because they are afraid of all the added work they have to do. However, they later become accustomed to the changes.* (P1)

HoD2 also asserted that educator reluctance to implement the programme at the beginning was a challenge but these were overcome through workshops, meetings and the gradual introduction of mentoring and with the supervision tools.

e. Pace of the JiP

Educators also complained that the focus of the JiP is on covering the curriculum and it does not allow educators the opportunity to move at their own pace, according to the needs of the learners. There are sections that learners grasp easily, whereas in others they struggle. The JiP moves at a rapid pace because of the volume of content that has to be covered, leaving assessments and examination to the last week of the term. These were some comments:

> *We try but we are struggling because time is not on our side…. Concepts need to be introduced step by step to the learners not changed immediately before the learners have grasped the concepts but this may delay the curriculum coverage*. (EDB3)

> *No time is left for examinations and marking.* (EDC2)

EDA3 pointed out that learners who do not understand are left behind daily. She went on to explain that this is an acceptable practice with Jika iMfundo. The problem, she remarked, became compounded if left to the end of the week. EDA3's comment is indicative of this:

> *Jika iMfundo to moving too fast. There is one day for consolidation. A learner that is lagging behind from day 1 to 4 will have too much of work to catch up with on a Friday. Jika also says that learners get other opportunities to practice the same skill but this is with bigger numbers. If the child didn't understand with smaller numbers, how will they understand with bigger numbers. Holidays and other unforeseen circumstances also hinder our progress, Learner absence from school is also a problem.* (EDA3)

P2 confirmed that he had received complaints from the FP educators at SCHB that they had insufficient time to teach the skills adequately for all learners to understand them. Furthermore, EDB1 attributed the shortage of time to too many assessments.

There are time constraints as there are too many assessments. We are forced to move on to new sections even if more time is needed to teach each section. (EDB1)

The responses of educators highlighted the main challenge experienced by educators with regard to the JiP which is the rapid pace. The lessons go up to the second last week of the school term. Not much time is left for administration of tests, examinations and reports. FP educators are rushing through the content without learners grasping the skills adequately.

f. Lack of congruency between JiP, CAPS and SASAMS

Some educators at SCHA and SCHC also drew attention to the mismatch between the CAPS policy document, the tracker and SASAMS, (South African Schools Administration Systems) with regards to assessments and mark allocations.

HoD1 stated:

We have to do additional work because the number of assessments in Jika and SASAMS are not the same in the Foundation Phase, whereas EDC2 confirmed: *There are some contradictions between the policy document and the tracker with regards to the assessments. We had to covert the marks according to SAMS.* (HoD1)

In essence the responses indicate a lack of congruency between the mark allocation for assessments in the CAPs policy document, the JiP and the SASAMS mark sheet which required educators to convert assessment marks to make them compatible to the SASAMS.

g. Lack of parental support

The lack of parental involvement in their children's school activities, is a major challenge at all schools, as indicated by P3:

Thirdly, and very important is the lack of parental support with regards to their children's work. Whether it is classwork or homework. They don't show up at parent meetings, budget meetings or SGB elections. It is very disturbing for principals and schools. We are trying to improve results on our own. (P3)

Parents according to this response do not assist their children at home and fail to attend meetings arranged by the school. Principals feel that they are not supported in their efforts to improve results. P1 confirmed that less than half of the parent population is involved in matters relating to their children.

The comment by P1 is indicative of this:

It's the parents of the learners who are well disciplined and excel at school that show any interest. This represents less the half the learners. (P3)

EDA2, EDC1 and HoD3 also confirmed the lack of involvement of parents in monitoring their children's work negatively impacts their homework, classwork, results and discipline.

The challenge for most educators and SMT at schools is the lack of involvement of parents in the education of their children. Parents do not attend school meetings, show apathy in joining the SGB, and more importantly do not monitor the work of their children.

h. Inadequate resources

Another challenge experienced by schools in the implementation of the JiP is with the supply of incorrect quantity of workbooks and inadequate funding to purchase the full complement of textbooks as pointed out by P1:

> *We do not get the correct number of workbooks and the department funding is not enough to buy textbooks for the whole grade. We have been topping up for years and still don't have the full complement of textbooks.* (P1)

The provision of the toolkits on a memory stick also presented a challenge to some schools as schools are unable to print these.

P3 considered it to be financially challenging and stated:

> *Not all schools possess the same resources. While one school might be able to print and make copies of the Teacher Toolkits which are provided on a memory stick, other schools, like mine find it costly*. (P3)

The challenges with inadequate resources in terms of numbers of pupils and the content of the workbooks, the lack of support from the department and parents, and the increase in the workload, are challenges experienced by the other schools as well, which are impeding the efficacious implementation of the JiP. Besides the challenges experienced with the programme itself, there are many other contextual issues that affect curriculum coverage, which the researcher believes have to be resolved first to improve the morale of educators.

4.2.6 Benefits of the JiP, its Impact and Sustainability

a. Benefits of the JiP for educators

From the comments made at all three sites, it was evident that the majority of participants viewed the JiP as an intervention that was beneficial to teaching and learning, but to varying degrees. Concerning the benefits to educators, the programme, through the provision of workshops and the educator toolkit, provided educators with skills to teach the mathematics content adequately. By providing educators with lesson plans, the JiP has freed educators to concentrate more on the

presentation of the lessons. Educators are given clear guidelines on what (topics), how (method) and when (how long to spend on a topic) to teach the content. Educators are able to present the content with the minimal resources.

> *Jika iMfundo has made life easier for me. It helps me with my planning, assessments are provided which educators can adapt. And it helps educators cover the CAPS curriculum for the year.* (EDA3)

Educators were thus able to cover the content adequately. This view was confirmed by HoD1 who maintained*:*

> *I think it helped teachers with record keeping. But as far as the learners are concerned it moves too quickly and does not benefit them.* (HoD1)

P1 remarked on JiP improving teaching and learning through the provision of workshops to educators:

> *Teaching and learning has improved because the educator has been exposed to workshops. Their preps are more detailed with relevant activities, assessments, homework and reflection … The learners' results have improved in maths.* (P1)

There were similar sentiments echoed at SCHC with EDC1, EDC3, HoD3 and P3 all being in agreement with the decision taken by the KZN DBE to implement the JiP. EDC1 felt that JiP gave educators, especially the less experienced ones, more confidence in teaching mathematics.

> *I feel that Jika iMfundo is helpful to teachers. It explains step by step how to teach the content. Trackers help track curriculum coverage. The resources and books are provided for lessons.* (EDC1)

> *Jika iMfundo does make teaching and learning easier, in that it specifies what to teach and when to teach it. It provides a year planner. The textbooks and assessment samples are available and CAPS compliant.* (EDC3)

HoD3 also explained that by providing lesson plans, resources and exemplars for educators, preparation time was reduced and educators could dedicate their time to teaching and completing the curriculum. This is the reason why HoD3 considered the focus of JiP to be on improving curriculum coverage at schools:

Jika iMfundo is improving curriculum coverage because the educators are better prepared to teach. They have lesson plans, learner resources and exemplars. They also have more time to teach because their preparation time is reduced. (HoD3)

P3 reported that the JiP allowed educators to use a variety of teaching methods and that this improves the educators' positivity towards curriculum change, coverage and management.

Some educators claimed that their teaching skills were improved through the provision of developmental mathematics content training by the DBE. Educators said this was advantageous since it prepared educators for the teaching of mathematics through yearly training sessions.

Furthermore, educators with inadequate content knowledge in the teaching of mathematics are supported through the provision of lesson plans to prepare and deliver lessons confidently. Learners should, therefore, be receiving quality education by well-prepared educators and there should be no gaps in their knowledge. The provision of exemplars for assessments also maintains a standard across schools in the district. At SCHC, the educators stated that the learner resources are useful and provide activities. This was corroborated by the statements of the HoD and the principal.

Curriculum is easier to cover by following the teacher toolkit. The resources can be photocopied. The lessons are planned so the teachers do not have to spend too much time with planning and preparation rather they can concentrate on teaching. (HoD3)

Educators and managers stated that JiP simply ensured that educators in the classroom are covering the CAPS curriculum adequately and the managers are ensuring that this is accomplished through monitoring and the provision of support.

Because we manage to stick to the curriculum as per the policy. (EDB3)

It prevented educators from choosing what they wanted to teach and ignoring the rest. (HoD1)

Jika iMfundo provides clear guidelines on class activities, assessments and resources. It has assisted with the planning and presentation of lessons. Educators are assisted to manage the curriculum with regards to time and content. Areas that need to be extended are allocated more time. (HoD2)

The general view of educators is that JiP ensured that they were adequately prepared for their lessons by providing them with lesson plans. Furthermore, JiP equips educators with content knowledge to teach more effectively and were enriched with additional skills in their teaching of

the content. Additionally, educators are confident that JiP assists in the coverage of the mathematics curriculum. HoDs and principals were of the opinion that educators are able to prepare and present the content more adequately with the intervention of JiP. In SCHC, educators in grades 1 to 3 have made optimum use of the intervention, while in the Intermediate Phase and Senior Phase they are using JiP as an additional or optional resource. Interview data were corroborated with observations and document analysis.

Educators at SCHA have implemented JiP in the classroom for the past three years. They make use of the toolkit to plan their lessons and use the resources in their teaching. Furthermore, they use the tracker to track curriculum coverage.

The principal at SCHB, who also found JiP to be beneficial in tracking and covering the curriculum, also identified areas in which learners are struggling.

> *Clear guidelines have been provided for maximum curriculum coverage.* (P2)

Overall, the majority of SMT viewed the JiP as having benefits to educators, as it made their work lighter by providing them with assistance in planning their lessons. Educators welcomed the provision of the Teacher Toolkit for managing curriculum coverage. the learning provides resources; helps to track curriculum coverage; reduces the amount of time spent on planning

b. Benefits for learners

Two contradictory views emerged on the benefits of the JiP for the learners. While the majority of INTER/SEN educators were of the opinion that JiP helps learners understand and grasp concepts, the majority of FP educators viewed the pace of the tracker to be too fast with a focus on curriculum coverage and not on the slow learner as indicated by EDA3, EDB1, EDC2 and HoD1. The following were some of their responses:

> I *don't think it is benefiting the learners as it requires them to rush through the content. There are too many concepts to teach per day. The structure of content is stretched over four terms. There's no time for consolidation, revision and remedial work. This is done at the end of the term.* (EDC2)
>
> *I don't think there is much benefit. Besides trying to ensure curriculum coverage at all costs. There's more focus on rushing through the curriculum instead of focusing on the needs of learners.* (EDB1)

EDA2, in constrast, stated that the JiP has lots of repetition of mathematics skills which gives learners the opportunity to understand the concepts. In addition, the provision of workbooks which

have examples and activities allows for learners to practise their work. EDA3 believed the JiP brought about order in curriculum delivery by making planning easier and providing resources. In addition to this EDB2 considered the JiP lessons to be structured in such a way that it catered for all ability levels of learners. EDA1 a FP educator felt that the combination of concepts in a lesson is beneficial to learners. She commented:

> *It is good for the learners to do more than one operation in the same lesson … it is preparing them for competition with learners from other countries*. (EDA1)

The SMTs at all three schools considered the JiP to be very beneficial to educators and learners in one or more of the following ways: that it provides assistance in planning; time management; provides clear guidelines for maximum curriculum coverage and lessons are well structured and cater for all levels of learners. P3 asserted that learners are exposed to a variety of methods and activities as the educators follow the lesson plans provided by the JiP.

From the analysis of the interview data, the researcher was able to ascertain the following benefits of the JiP for learners: learners are receiving the full coverage of the content. No aspects are left out by educators as they have timeframes for completing the topics. Learners have workbooks that are colourful and have activities that are completed at home and as homework. Learners are also given many opportunities to practice mathematical skills are these are repeated during the course of the year. Learners are exposed to different teaching strategies. Some educators and managers however did not see any benefits for learners as they felt that the JiP was simply focusing on providing timeframes to complete the content. These they argued were too fast paced and required the educator and learner to rush through the work without the learner understanding the content adequately.

c. Improvement in curriculum coverage and results

Changes are usually introduced to improve the status quo or to introduce something new. According to its developers, the JiP was introduced to bring about an improvement in learning outcomes through adequate curriculum coverage (cf. 2.2.6.3). The intention of the JiP is to have competent educators in the classroom who can deliver the content effectively and produce good results.

SCHB and SCHC have assessed the impact of the JiP through the comparison of results over the past four years and by analysing the reports on audits of educator and learners' work. Observations

and discussions among the educators and SMT at SCHB have led them to the conclusion that the JiP has made a change to the curriculum coverage and to the improvement in learning outcomes.

They made the following comments:

> *Yes, we have assessed the effectiveness of Jika iMfundo by analysing the results of assessments. We have compared results with other years and terms. Also, through the discussions with educators and observation of lessons and by auditing teachers' records and learners' books.* (HoD2)

> *The Jika iMfundo Programme has been assessed. We conduct analysis of work and we check on curriculum coverage.* (P2)

Participants also concluded that the JiP is beneficial in improving the outcomes of learners by conducting analysis of test results. This is evident in the following comments:

> *By scrutinizing the learner results after assessments. We have found that there is an improvement over the past few years.* (P3)

> *Jika iMfundo is working. We know this because we analyse the learners' results each term.* (HoD3)

The effectiveness of the JiP had not been formally assessed at SCHA. according to the principal. P1 did maintain that there is an improvement in the mathematics results of learners at the school and his HoDs had reported to him on the improvement in curriculum coverage. He stated that some of the improvement may be attributed to the JiP but he was not certain. Educators also indicated that through their daily engagement with the programme, they have been able to identify some problems with the programme. This is a positive indication that educators are in fact reflecting on their actions and making observations, which are being used to inform their future decisions and actions. Although the goal of this study was not to determine the effectiveness of the JiP as a programme to improve curriculum coverage, participants did indicate that the programme was impacting the performance of learners positively.

c. Sustainability and institutionalisation

Sustainability and institutionalisation are the ultimate goals of any change. As explained in the literature study, change is a process that proceeds through stages (cf. 2.2.7). If the change becomes a routine, then it is considered to be institutionalised. Any successful implementation of change has to, over a period of time, result in this final stage of institutionalisation. That is to say, the

innovation no longer has the status of an experiment, but instead routines and procedures are established, and the infrastructure is in place (Sembiring *et al.*, 2016: 5).

To determine whether a change has been institutionalised, it would have to be assessed a few years after the implementation phase. As indicated previously, the researcher's intention was not to determine whether the change was institutionalised but to obtain the views of educators on whether the changes proposed and implemented at their schools were "not passing perturbations in the way people conduct their work" as put forward by Anderson (2010: 77). Could the schools sustain the JiP programme?

All participants, except one educator from SCHB, were of the opinion that the JiP could be sustained given certain favourable conditions. Participants at indicated that the JiP was already a part of their daily routine, not only in the teaching of mathematics, but also in the supervision of the curriculum in all other subjects. They linked the sustainability of the JiP to the future actions of the KZN DoE. This is indicated in their responses:

> *We are using Jika iMfundo in the teaching of maths but also to manage the curriculum. Whether we continue with the programme will depend on the Department [of Education]. They might just change the CAPS curriculum or get rid of the programme. Also they need to continue providing us with the toolkits and work books. Already they stopped giving us the printed copies of the trackers. It all depends on the funds they have.* (P1)
>
> *I think we will be able to carry on with Jika as long as the department keeps giving us our trackers and workbooks.* (EDA2)
>
> *The programme can be sustained depending on whether the Department continues to provide us with resources. They also need to conduct workshops, to train teachers on curriculum delivery for the different subjects and prepare teachers adequately to carry out the assessment process. We need the department intervention to reduce class sizes. Finally, we need to have efficient monitoring and supervision by the department, principal and HoDs.* (HoD2)

The above statements in essence reflect the positivity of schools to sustain the JiP. They are willing to continue with the programme if they receive continued support of KZN DoE. Schools needed the following to happen in order to sustain the JiP: ongoing provision of resources and workshops; reduction in class sizes; efficient monitoring by SMT and department officials; less restriction of the CAPS curriculum for mathematics and a reduction in the number of assessments.

P3 also emphasised the need for greater involvement and commitment of educators to follow what they have learned in order to sustain the JiP.

> *Educators need to adhere to all the changes; Use the JiP together with CAPS to reinforce concepts; there must be proper planning and preparation, good time management and proper control of files and learner books.* (P3)

EDB2 at SCHB had a similar view to P3, suggesting that for the programme to be sustained, educators will have to change their teaching styles and the way in which they prepare their lessons.

> *Adjustments will have to be made to their teaching styles and the way we prepare lessons… they would have to ensure that they prepare for lessons according to the trackers and that their lessons are well structured and use the LTSM that is provided*. (EDB2)

EDC1 and HoD3 suggested that the JiP could be sustained if the pace of the tracker and content in mathematics is reduced. They were of the opinion that the CAPS curriculum for mathematics needs to be reduced to allow time for slower learners to master the content.

> *Yes, these changes can be sustained. Jika iMfundo follows the CAPS document. Lessons are broken down into weeks. My concern is that there is too much content so learners who don't understand a concept never get to grasp it because Jika iMfundo does not allow it. Changes need to be made with CAPS. Allow learners to master content rather than having too much*. (EDC1)
>
> *The programme does not allow educators to teach a concept until it is fully understood or grasped by learners… there needs to be less content taught per term.* (HoD3)

EDC3 drew attention to the fact that children were struggling due to language barriers and schools did not receive support from parents. She calls for more discipline and seriousness from both parents and learners in school matters. For the JiP to be sustained, there is a need for parents to be trained on changes in education so that they are better able to assist their children. By doing so, parents will in effect be supporting schools to be more effective.

> *Our learners are 95% isiZulu speaking and we are an English medium school. Learners work at a slow pace due to the language problem. Jika iMfundo doesn't consider slow learners. Not all learners are the same. Parents need to be educated as well regarding CAPS, Jika iMfundo and changes. They need to assist their children so we can do our jobs more effectively. There's no discipline and seriousness on both the parts of learners and parents.* (EDC3)

EDB1 presented a very negative attitude concerning the JiP. She made the following remarks on what needs to be done to sustain the programme:

> *The programme will be done because teachers are forced to use this method, not because it is beneficial. The Department needs to restructure the curriculum taking into account the actual time needed, not just time we have per term. Number of assessments need to be reduced.* (EDB1)

In the participant's perspective, although the JiP does not hold any benefits for teaching and learning it will be followed as mandated by the KZN DoE. EDB1 calls for restructuring of the time needed to teach the content and the number of assessments in mathematics curriculum in CAPS.

From the data, it is evident that the majority of educators and managers consider the JiP to be a sustainable programme because it is beneficial to teaching and learning. They are committed to making the activities of the programme a daily routine but they have certain conditions that need to be met for the programme to be institutionalised. These conditions included but are not restricted to: the DBE's continued provision of resources, such as work books and toolkits; continued development of educator skills through training of new educators; continuous monitoring of the programme by the DBE; motivation of SMT and educators; reduction in class sizes and number of assessments, and, finally, the restructuring of the CAPS curriculum for mathematics, taking into account the time needed to teach a concept. These factors, according to change theorists Morrison (1998: 143) are referred to as facilitating factors, which may determine whether a change will be institutionalised or not. This is consistent with literature that lists lack of interest, support, and funds; limited capacity for sustained continuous change; a change in behaviour and values is not sustained; no ownership of change; apathy, and departure of senior staff and leaders, as reasons for a change not being sustained or institutionalised (Morrison, 1998: 143). According to the Theory of Action, sustaining a change calls for resilience, which implies persistence and flexibility. Persistence means continuing in the face of adversity and barriers. Flexibility is the ability to adapt and change (Fullan, 2006). Educators and managers must persevere in spite of the challenges and need to be willing to modify their actions for the JiP to be sustained. The idea is to have less content which learners are able to understand well than have too much content which learners have a basic understanding of. Once again, the willingness of the educators to persevere is indicated in the above comments. They are committed to the programme but they believe that it will only succeed if the issues of pace and content are addressed.

4.2.7 Resources Provided for Implementing the JiP

a. Teacher Toolkit

Literature reveals that that failure of many curriculum innovations can be attributed to the educators are not being adequately equipped with proper resources to implement change (Badugela, 2012; Lizer, 2013). Educators have resources for teaching, in the form of the Teacher Toolkit which contains the CAPS aligned curriculum tracker, planner and resources (templates of charts, games and worksheets), enrichment activities, test exemplars and remediation activities (cf. 2.2.6.2).

The majority of the participants were happy with the toolkit and find it beneficial in planning and tracking curriculum coverage. The toolkits are not difficult to understand and use stated EA1, EDB3 and EDC2. EDB3 attested that the use of the tracker to *monitor and record content and date of the lessons* that are taught, increases the efficiency and ease of teaching the content. Furthermore, educators considered the linking of the tracker to the policy documents, workbooks and the textbooks to convenient and user friendly.

> *The tracker is CAPS aligned and it provides references to the policy document, our textbooks and the learners' workbooks. It's simple to use and it makes my work easier.* (EDA1)

Additionally, EDC2 and EDA3 indicated that all the lesson plans and teaching strategies have examples. The availability of all information makes it easy for educators to plan and present the lessons. EDC2 also drew attention to the good quality of the activities that are provided in the planner. EDB1, EDB3, EDA1, EDC2 also attested to the usefulness of the exemplars provided for assessments. The majority of educators averred that the provision of lesson plans, reduces the administration tasks and eased the workload of educators. Some such responses were:

> *I think it reduces paper work for the teacher.* (EDC2)

> *There is less paperwork and preparation that is needed.* (EDB3)

When questioned about the availability of the toolkits, EDA2 maintained that the department of education initially provided hard copies of the documents but sometimes *these used to arrive late at the school*.

According to EDA1, the toolkits were first delivered to schools, but thereafter the principal had to pick them up from the circuit office.

> *These are now provided on a flash drive and the onus is on the school to print them for the educators.* (EDA1)

The accessibility of the toolkit, however, is a problem in some schools, with inadequate resources, such as paper and printers, as the toolkit is now provided electronically. The literature study has shown that a lack of resources, such as lesson plans, can become a hindrance to the implementation of change (Thompson *et al.*, 2013).

EDC1 also touched on the lack of alignment between the tracker and the mark allocation in mark sheets provided by the school administration system (SASAMS).

> *The assessments do not correspond with SAMS.* (EDC1)

EDB2 concurred stating*:*

> *We have added work as the tasks in Jika are different from SASAMS so we have to adjust our marks.* (EDB2)

In general, educators at SCHC were happy with the toolkits. They found them helpful in lesson planning. Educators at this school are not allowed to use the lesson plans as they are given. They are required by the SMT to use the toolkit to prepare their own lessons. Educators have therefore found that their paperwork has not decreased.

> *The toolkit does not really reduce our paperwork. We are not allowed to use it directly. We have to write our lesson plans. Assessments also cannot be taken directly. We have to combine various resources.* (EDC3)

Even though they have to do additional work, these educators have found that the toolkits are very beneficial in their planning. This viewpoint is inherent in the statement by EDC1:

> *Teacher's toolkits are great though. They are very helpful in lesson preparation. In the teacher toolkits there are resources which can be photocopied.* (EDC1)

The toolkit was analysed during document analysis. The planner as indicated by the educators are well structured and cater for all aspects of the presentation of the curriculum, including assessments and homework. Time frames are provided for the presentation of the sequence of the lesson such as mental activities, recap and correction. The resources in the toolkit which are

aligned to the CAPS curriculum may be copied or cut out. The planner makes reference to the policy document, textbook and learner workbook. Six textbooks have been accommodated in the toolkit.

Educators at SCHC only use the toolkit in the FP. Analysis of the toolkit corroborates the comments of educators of the effectiveness of the toolkit for planning of lessons and assessments. The tracker is used effectively to record the start and finish dates of topics from the CAPS curriculum. All participants confirmed using the educator toolkits on a daily basis for their lesson planning. Analysis of the educator lesson planning provided evidence to this effect. The lesson follows the topics, format provided in the toolkit in respect of sequencing and time frames and in the use of resources provided. While some educators are make good use of the resources provided in the toolkit, others are using their own resources. Educators copy the resources and duplicate them for the learners. The general finding is that educators are happy with the toolkit and use them to plan effectively for their lessons and assessments and to track their coverage of the curriculum.

b. Learner workbooks

According to literature, learners are provided with DBE workbooks in mathematics and they also have DBE workbooks in mathematics (Metcalfe, 2017). Soft copies of these are also available for download on the KZN DoE website (KZN DoE, 2010). The responses from the interviews confirmed what the researcher had ascertained from the document analysis and in literature. Educators maintained that they utilise the JiP learner workbook for *class activities and homework*. They had complained of a *shortage of workbooks* every year. The DBE workbooks for mathematics are used in conjunction with the textbook. When questioned about the availability of workbooks.

EDA1's response was:

> *The Department doesn't give us enough workbooks for the whole grade. They're always using the roll from the previous year … We use SASAMS. Why don't they get the correct numbers from there?* (EDA1)

All schools in the study use the South African Schools Administration System (SASAMS) to capture all administrative data, which they submit to the DBE every quarter. EDA1 felt that the DBE should be proactive and access this information from the database so that the correct number of workbooks are provided to schools.

When asked about how they managed with less workbooks, EDA1 affirmed that photocopies of the workbooks were made. EDA1 went on to assert that the principal was against this practice as he considered it a wastage of paper. EDA2 pointed out that the principal endeavours to acquire books from neighbouring schools that have an excess. When questioned on the use of the workbooks, EDA1 indicated that she completes some questions from the workbook as classwork and the learners are required to do the others at home. She also went on to explain that she marks the workbook regularly, which is a requirement at her school.

HoD1 corroborated this information, by pointing out that the educators did an exercise from the textbook and workbook activities are done for homework and emphasised the fact that the HoDs monitor the work in the workbooks, according to their supervision schedule. Educators are required to monitor learners' work in the workbooks and mark the books daily.

The Foundation Phase educator and HoD complained about the size of the font, instructions being in isiZulu and English and the workbook being too detailed.

HoD1's comment confirmed this:

> *The department provided us with teacher's guides and learner books. The learner book font is too small for grade 1 to 3 learners. The instructions are in Zulu and English. This is very confusing for the learners. Also, the workbook is too detailed and confusing for FP learners.* (HoD)

The educators and SMT at SCHB also confirmed that they are using the learner workbooks in the Foundation Phase and the DBE workbooks for grades 4 to 7 and that the books are used in their daily class activities. P2 confirmed that educators and learners at his school are utilising the resources provided. He was aware of this as his HoDs provide him with audit reports every term.

The general finding is that two learner workbooks are used at schools for activities. These are done for classwork and/homework. The challenges with the workbooks is the provision of incorrect quantities of books which has led to shortages at schools. The JiP workbook which is provided to the FP is bilingual. This has led to confusion among the FP learners. The line spacing in the book is also not consistent with the size of writing in the phase. The book has too much content and detail. Educators are using these books in their teaching and for activities which are done in their classwork books.

c. Supervision Tools

The HoDs and the principals reported receiving supervision tools from the district on a memory stick. This is consistent with literature on the JiP which alludes to the provision of resources in the form of supervision tools to the managers, to support them in monitoring curriculum coverage (cf. 2.2.6.2).

The following comments indicate the provision of soft copies of the supervision tools:

> *The department gives us the toolkits on a USB. The monitoring tools were also given on a USB. They gave us this once but the USB with the toolkits are given every term.* (P3)

HoDs use these tools to supervise the work of the educators in their departments. The supervision tools are used by the SMT to audit the work of educators.

> *We use them to conduct term audits.* (HoD2)
>
> *Frequent daily, termly and yearly audits are being done*. (P2)

HoD2 listed the tools as the HoD curriculum supervision template, the one-on-one meeting template and the template for reporting to the principal. Analysis of these tools, at the schools revealed that the SMT are making use of the supervision tools to monitor curriculum coverage.

When probed on the effectiveness of these tools, HoD2 claimed they were very effective in supervising curriculum coverage as they generate substantial information on the educator and learners, with regards to curriculum coverage. The following statement is reflective of this:

> *The supervision tools are very effective. We are using them to supervise curriculum coverage. The HoD does not have to prepare her own material. It has a lot of details and it gives a comprehensive overview of the educator, learner and curriculum*. (HoD2)

This was corroborated by P3 who stressed that the supervision tools were very helpful in managing the curriculum and she pointed out that the tools are very convenient as HoDs do not have to devise their own evaluation instruments.

HoDs have made a few changes to the tools to suit the needs of the school. While the HoD at SCHB indicated that the supervision tools provided by the department were modified to suit the needs of the school, the principal stated that no modifications were made. From the analysis of the HoD supervision file, it was evident that some modifications had been made to the supervision tools at SCHA and SCHB. Small school specific changes, like the name of the school were obvious additions. Choice of symbols to indicate activities like classroom visits were personalised. Other

changes were in the number of supervision activities and meetings carried out per term. These varied from school to school. SCHC was utilising the tool without any alterations.

It is a concern that P2 is either unaware of the contents of the JiP supervision tools or he is not conducting audits. The former proved to be true as the principal's signature appeared on the audit reports in the HoD supervision file which was analysed to corroborate the information from interviews.

> *At our school we have modified the supervision tools to suit our needs. We use them to conduct term audits.* (HoD2)
>
> *The supervision tools are used as given by the DBE without modifications. Frequent daily, termly and yearly audits are being done*. (P2)

Although the supervision tools are being utilized at SCHC, HoD3 indicated that it is too demanding to monitor all educators and learners in her department as she has a heavy teaching load.

> *We were given the monitoring tools. These are time consuming. It is not easy to monitor all educators work or learner's books as I have a heavy teaching load. There is too much administration work.* (HoD3)

Triangulated data from interviews and document analysis revealed that the SMT have adapted the supervision tools to suit their needs and are using them to monitor curriculum coverage. There is general consensus among the SMT on the effectiveness of the tools in auditing and supervising the work of educators. SMT also appreciate the provision of standardised tools that saves them the trouble of preparing their own. SMT have encountered challenges with the increased workload that the administration of these tools entails.

4.2.8 The Roles and Responsibilities of Educators and School Managers in Implementing the JiP

a. Implementing the JiP in the classroom

From the researcher's interaction with the educators at the three schools, it became clear that their role in JiP is to implement the change within the classroom by making use of all the training and resources provided to them. The educators were in agreement that they are the people that are responsible for implementing the change in the classroom and that they have a responsibility to accept change and ensure that it is successfully implemented.

EDA3 said:

> *We need to accept the change and make it work or we will become stressed*. (EDA3)

The fact that educators are required to change their behaviours and actions in order to implement the change is indicated in this comment by EDA2:

> *Every time there is a change, we are the ones that must end up changing how we do things.*(EDA2)

The motto "what I do matters" (Metcalfe, 2018: 12) is a plea for stakeholders to be morally accountable for their actions and acknowledge the influence that they have on learning outcomes. Elmore (2008: 1) maintains that learner performance can be improved by raising the coverage and level of the content that is being taught to the learner. Educators in the three schools stated that they are instrumental in managing the curriculum in the classroom. They are obliged to make sure that the content is covered adequately within the allocated time frames. They also ensure that they are prepared well and deliver the lessons according to the planner. Educators do not always adhere strictly to the planner.

EDB1 however stated that she did not adhere strictly to the planner. She sometimes uses her own methods and makes use of other resources. Educators can thereby ensure that the mathematics curriculum for their particular grades is adequately covered for the year.

Educators were in agreement that curriculum coverage is important but they felt that all learners should be given equal opportunities to complete the sections at their own space. Some believed that JiP's main focus of curriculum coverage is to the detriment of the learner. They felt that the CAPS curriculum needed to be adapted so that an aspect such as the measurement of time could be done thoroughly in one term, instead of being spread out over many terms.

At SCHA, the educators are using the resources, namely the tracker, planner and workbooks and resources, to teach the mathematics curriculum for their grades. The programme is being implemented in the planning, presenting and tracking of the content. The following statements indicate the actions that are required by educators in implementing the JiP in their classroom practice:

EDA1 mentioned:

> *I use the tracker to see if I'm completing the content on time. I use the lesson plans and assessments and the resources when I teach*. (EDA1)

While EDA2 declared:

The programme has been implemented for the last three years. I use all the resources and workbooks. I follow each lesson, date, themes, and assessments according to Jika iMfundo. (EDA2)

EDB1 and EDB3 mentioned using the tracker to track their coverage of the curriculum. EDB1 did however say she used it as a guide:

I use the tracker as a guide to assess my curriculum coverage, but I do not follow it accurately as this is impossible due to factors such as re-teaching of slow learners. We lose time because of school activities and time is reduced at school due to exams. (EDB1)

This statement indicates that the time allocated for educators to cover the curriculum effectively, is reduced by the other activities at schools.

EDB3 is also implementing the JiP. This educator listed planning of lessons and assessments according to CAPS, and using the exemplars to set and track her curriculum coverage of the activities in which she engages, in the execution of her duties.

Similar responses were obtained at SCHC, with educators stating that their role is to implement the JiP by covering the content. To achieve this, educators had to make use of the resources provided by the programme and the DBE in planning and delivering the content.

I follow the teacher's toolkit lesson plans and the activities to plan. In conjunction to that I use the DBE Blue Book for the learners. I also use the activities from Jika iMfundo Learner's Activity Book. I also track my curriculum coverage using the tracker. (EDC1)

The researcher found that there was a contradiction in what EDA3 said about reflection and what was actually done in practice.

I am able to reflect on lessons and it helps me link the textbooks to the DoE workbooks. (EDA3)

This statement shows that educators are aware of their roles in the JiP but are not being consistent in fulfilling them.

Since the main role of educators in the JiP is the coverage of the curriculum in the classroom, the researcher found that it was essential to determine their views on the importance of this aspect of their role function, while the SMT emphasised the importance of curriculum coverage to achieving learning outcomes.

Curriculum coverage is very important. There are concepts or work that needs to be taught in a previous grade for a learner to cope and understand concepts taught in the next grade. (HoD3)

Some educators felt that the focus on curriculum coverage should not compromise the needs of the learner. This sentiment presented by EDB3 was echoed by other educators as well:

> *Although curriculum coverage is important, we cannot neglect the needs of the learners. Most of the time we have to rush to keep up with the tracker … we are required to move on by Jika even if some learners cannot keep up.* (EDB3)
>
> *Curriculum coverage is very important as it ensures that the learner achieves in the following term and year.* (P3)

The generally espoused belief of educators and managers is that curriculum coverage is important in improving the performance of learners. Trackers are now being used by educators to track their curriculum coverage and to reflect on their teaching weekly. Educators in the FP have experienced challenges with the space of the tracker so it is not adhered to strictly. While some educators are using the planners to prepare their lessons, others use it as a guide. Educators are following the content and assessments for the subject according to CAPS.

b. Supervising curriculum coverage

The supervision of curriculum coverage at school is the responsibility of the HoD. According to the Personnel Administrative Measures (PAM) document the HoD is required to participate in the management of the school in which their "supervisory role in linked to teaching and learning" (Mthiyane, Naidoo & Bertram, 2018:3) which is the "instructional core" of the school (Elmore, 1996). The aim of the JiP is to strengthen and support the HoD in this key supervisory role (Mthiyane, Naidoo & Bertram, 2018:3). To accomplish this role, HoDs have to engage in the following activities:

- To coordinate assessment, homework, written assignments, etc. of all subjects in that department.
- To coordinate and guide teachers on the latest ideas and approaches on the fields within which their subjects are based.
- To guide inexperienced staff members and control the work of educators and learners in their departments (Ibid.).

From the responses of the HoDs and the analysis of their supervision files the researcher ascertained that their main role in the JiP is supervision of curriculum coverage as indicated by HoD1.

> *My main task as the HoD is to make sure that the curriculum is being covered.* (HoD1)

HoDs indicated that to ensure that the curriculum is covered, they have to monitor the work of educators through audits of records such as, ATP's, lesson plans, trackers, assessments and also by auditing the learner's work.

> *I check the educator's file, learners' books and conduct classroom visits.* (HoD1)

HoD3 confirmed that Educators submit their trackers each Friday for checking together with this, various assessment tasks are moderated and learners' assessment books are checked and monitored. HoD2 also indicated that the to fulfil this role, HoDs have been provided with supervision tools, which they are using to conduct audits.

> *We have an audit programme for each term which includes curriculum coverage, that is the trackers. The monitoring tool which focuses on the teaching plan for formal and informal tasks, learners' books, status reports on start and completed dates, remedial strategies, is used to assist the HoD and teacher in managing the curriculum.* (HoD2)

HoDs were unanimous in their views on the importance of curriculum coverage for the improvement in learning outcomes. The dominant view held was that adequate curriculum coverage prevents gaps in the learner's knowledge as the learner progresses from one grade to the next.

This view is inherent in the following comments:

> *By covering the curriculum adequately, it lays the foundation for the next level to follow. Curriculum coverage may impact learner achievement negatively or positively depending on planning and tracking. Good coverage will increase learner achievement.* (HoD2)

> *Covering the curriculum is important so that the learner does not have any gaps when he/she goes to the next grade*. (HoD1)

HoD1 mentioned using a supervision management plan, which was also the case at SCHB and SCHC. The researcher was able to verify this during the analysis of the HoD supervision file.

The supervision management plan is a plan of action for the supervision of educators' and learners' work. The type of supervision, educator's name and date of supervision are contained in this plan.

> *I have a supervision management plan which is like a calendar where I record the names of the educators and the type of audit that I'm doing. I give the senior management a copy and also the educators in my department.* (HoD1)

Principals in the study are ensuring that the behaviour changes expected from educators and HoDs are implemented and observable. From the researcher's observation and from the responses of principals, it is pleasing to note that principals are checking if educators are complying with the requirements of CAPS and the DBE. Most of the comments made by the principals however had to do with compliance.

> *I together with my SMT check the progress regularly to establish whether educators are complying with the changes*. (P3)

> *All audits carried out by the HoD is examined and checked. Sample audits are also done by upper management.* (P2)

This "compliance-driven control de-professionalises and deskills more highly-skilled teachers" (Metcalfe, 2018: 48).

An area in which there needs to be improvement is with creating an atmosphere and climate for conversations among educators, educators and HoDs and HoDs and principals. A lot of responsibility for the success of the JiP, which can be assessed by improved curriculum coverage, leading to improved learning outcomes, is the responsibility of schools.

Curriculum management has been the responsibility of the HoDs but in recent years, principals have been tasked with managing the curriculum as instructional leaders. According to Metcalfe (2017: 27), "Principals (and deputies) are to meet HoDs regularly to review the quality of coverage and tracking; take action to improve coverage; and supervise the overall management of curriculum in the school". This statement indicates the roles of principals and deputies for the objectives of JiP to be realised. Principals are responsible for curriculum management at the school. According to the principals, this involves mostly viewing the reports of HoDs on the audits conducted of educators' and learners' work. Principals also conduct sample audits approximately once a year. The principal mainly checks up on the supervision done by HoDs who have to report to them on the audits conducted.

P1 said that he does conduct audits of learners' books once a term. He stated further that he ensures that educators have content knowledge, use a variety of teaching methods and cater for learners of all ability levels in their teaching. The principal was also able to corroborate HoD1's claim that she has a supervision management plan.

> *The HoDs have developed a supervision roster. They monitor lesson preps –JP daily and Inter/Sen weekly. Work books of learners -once a term. I conduct audits of learners' books,*

> *once a term. I also have to ensure that the curriculum is understood clearly by the educators and taught using a variety of teaching methods. They must also cater for all ability levels.* (P1)

P3 ensures that educators are complying with policies. HoDs report to the principal on the work of educators and learners, at SCHA and SCHB. One-on-one meetings are conducted to assist educators who have problems.

> *I check the progress regularly to establish whether educators are complying. We engage in one-on-one meetings with those who are experiencing problems. My HoDs conduct class visits and monitor the work of educators and the learners. They report to me. I check the books of educators and learners' work once a year.* (P3)

Although P3 claimed that HoDs conduct one-on-one meetings, two of the three educators at SCHC had divergent views, stating that no such meetings have been conducted with them. Like P1 and P3, P2 also mentioned that his HoDs conduct audits of educators' and learners' work and he, together with his deputy principal, conduct sample audits. A follow on from these audits is the provision of training to educators that are under performing:

> *All audits that are carried out by the HoDs are examined and checked. Sample audits are also done by the upper management. Training is given to poorly performing educators.* (P2)

The main finding is that supervision of the curriculum is mainly done by the HoDs. The supervision tools are used to monitor the classroom practice and curriculum coverage of educators and also to monitor the learners' books. Evidence from these are used to report on curriculum coverage to the principal. Some HoDs conduct individual professional conversations with educators, while the others do not have the time to do so. Reporting and discussion of curriculum coverage is also conducted at subject and phase meetings. One school using the reports to provide training and development in areas of concern.

c. Managing the implementation of the JiP

Morrison (1998) alludes that for a change to be successful, once it is implemented, it needs to be managed properly. Besides managing the curriculum at schools as instructional leaders, principals have the important task of ensuring that changes are implemented successfully.

Principals reported that as the department officials at the site they have to implement any mandated change.

> *As department policy we as principals are expected to train and thereafter implement such changes and also to monitor, assess and recommend solutions to challenges*. (P1)

Principals and HoDs have to deal with the complexities of educational change. P1 and P2 mentioned having had to deal with the resistance of educators to the change. Not all educators received the change in the same manner. P1 and P2 had encountered resistance from some of the educators at their schools and these educators had to be motivated to support the change.

> *I make sure that my teachers are motivated to continue with the change … Teachers need to know that they are appreciated. Not only when there is a change but throughout the year.* (P1)

Richardson (1998) posits that educators can often resist mandated change. To circumvent this, principals must motivate their staff in various ways: P1 ensured that his educators were motivated, supported and appreciated. He had motivation sessions where power point presentations and videos were used to motivate educators in his morning briefings. P3 stated that educators who were progressing well with the implementation were rewarded. P3 pointed out that the principal plays a vital role in motivating educators develop a positive attitude towards change and in communicating information of the change to parents and the SGB.

> *My role is vital as I have to firstly motivate the educators to be positive towards the changes.* (P3)

P2 confirmed that educators needed to be motivated to accept the change and they needed training, support and resources, which were provided by the school and the department. He went on to point out that the implementation was monitored by the SMT.

> *The teachers need to buy into the change. Educators must be fully motivated and trained in the curriculum offered at the school. They must see the logic and reasons for why change is necessary. They need training and support. Both at school and from the department. They also need to have all the resources like teaching aids, textbooks, workbooks extra to help them implement the change properly.* (P2)

According to Li (2013: 149), there are two main methods for motivating staff: 1) economic - these refer to the staff members' "natural impetus" of salary and promotion opportunity, and 2) the

cognitive method, which is primarily concerned with staff development programmes. Principals in this study did not use any monetary incentives to motivate their educators but they did make use of developmental opportunities in the form of workshops.

Fullan (2006: 9), in his theory of action, stated that by building the capacity of educators, they develop internal accountability. This creates intrinsic motivation in the educators. P1 provides opportunities for the educators to improve their skills. He develops programmes at school for staff development. This is done in conjunction with IQMS (Integrated Quality Management Systems) and School Self Evaluation (SSE).

> *Educators identify their areas of weakness from IQMS. We also do School Self Evaluation. As a principal together with my SMT and Staff Development Team, we come up with a programme to provide skills development to my staff.* (P1)

He stated that he had to lead by example, and this corresponds with literature that states that principals have to display the actions that they need the educators to emulate (Wallace, 2005: 150). They need to be "role models" (Akinbode & Shuhumi, 2018: 614).

They need to understand the change process, plan for the change, understand the innovation and be able to communicate this to educators. All participants agreed that communication was the key to the successful implementation of change. Principals had to communicate to educators the reasons, the features and the benefits of the JiP for educators and learners. This is line with literature on communication in which communication is posited by the DOI theory, as one of four factors that will affect the continued participation of educators in the change process (Rogers, 1995). A lack of proper communication will lead to frustration and negativity. Morrison (1998: 143) also cites open channels of communication as a factor that promotes and facilitates the successful implementation of innovations. P2 indicated that he is "approachable" and employs an "open-door policy", where educators are welcome to discuss their problems with him. He provides a supportive environment for his educators to implement change.

Principals held meetings with their staff to train them on how to implement also the JiP. P1 pointed out that his role was to give his staff, SMT and SGB as much information on the change as possible by holding meetings and workshops. To accomplish this, he had to make sure that he was knowledgeable about the change he was implementing.

> *Meetings and workshops were held with the SMT, staff and SGB. Secondly, I have to communicate the changes with the parents and I have to work closely with the SGB.* (P1)

P3 also held regular workshops at which educators were provided information on the JiP. This platform was used to motivate educators.

Principals needed a plan of action to implement the JiP and put this plan into action. They had to have timeframes by which the programme had to be implemented. All resources had to be made available to their educators and they had to hold meetings and workshops to educate their staff on the intended change. These actions are in line with the actions advocated by Fullan (2006) in his theory of action. The implementation of the change was monitored and reflected upon at meetings and in conversations with the HoDs. As is promulgated by the DOI theory, people reaffirm their decision to continue with a change by reflecting on the results of an implementation (Wilson, 2015). Fullan (2006: 10) calls this stage in his action theory a 'bias for reflective action', which suggests that people learn best through a cycle of action and reflection.

The changes postulated by the JiP has to been monitored if the problems that were identified during this process are to be resolved.

P1 uses the staff meetings to reflect on the implementation of JiP and find solutions to the challenges experienced.

> *I also hold regular staff meetings at which Jika iMfundo is discussed. Many issues are brought up. We reflect on the implementation, identify areas of concern and then attempt to resolve these.* (P1)

P3 reported that the SMT were responsible for monitoring the progress of the implementation of change. The findings were then discussed at meetings. P3 was aware that problems would be an inevitable part of the change process but believed that solutions would be achieved through collaboration. P3 allows her educators to work at their own pace. She also ensures that they have the necessary resources to implement the change.

> *I together with my SMT have to check on how the educators are implementing the change. This is discussed at staff, phase and subject committee meetings. Educators will have problems. This is obvious with any change. We need to come up with solutions together to ensure that the educators do not get frustrated.* (P3)

P2 also indicated that there were problems with the implementation of change but team work and accountability were a way in which his school overcame these issues.

As a principal he ensured that these conditions were maintained by providing encouragement and support.

> *I together with the SMT check on the progress of all the people that are involved in the change.* (P2)

Common strategies adopted in the implementation of the JiP were identified from the interviews with principals. Principals received instructional leadership training at workshops. They had to be trained first before they could be tasked with leading the change. School-based training was provided to educators at workshops. This enhances motivation and is considered as a development opportunity. Key changes were communicated to staff, parents and SGB and roles and expectations communicated to educators and managers; Principals demonstrated acceptance of change by being positive and conveyed this to their educators. Akinbode and Shuhumi (2018: 614) expound that "Leaders need to be role models, build trust and develop team by ensuring a shared vision". Resources were made available to educators. Staff, phase and subject committee meetings were planned and held at which educators were provided support on the implementation of the JiP. Supervision tools are used to monitor curriculum coverage. Curriculum coverage has been monitored and reflected on at meetings.

4.2.9 Support Needed for the Successful Implementation of the JiP

a. School level support

Support for the implementation of the JiP have been provided to educators from within the school. Kihato and Kabemba (cited by Taole, 2015: 275) posit that a well-coordinated support system, at national, provincial, district and school levels, could help educators face difficulties in the classroom. The provision of support within the school is from the SMT. In reality, this support varied from school to school.

While educators at SCHA and SCHB reported receiving adequate support from the SMT in the form of provision of resources, monitoring and through the provision of developmental activities, some educators at SCHC found the SMT's provision of support through staff, phase and subject meetings to be inadequate.

Educators at SCHA and SCHB confirmed receiving support from the SMT, especially the HoDs at phase and subject committee meetings at which educators have the opportunity to discuss progress and challenges on matters related to the implementation of the JiP and curriculum

coverage. Feedback from supervision is also provided at these meetings as indicated by EDA1 and EDB2:

> *We receive a lot of support from our HoDs. They have subject and phase meetings where we can ask for help … give us feedback from the class visits and audit of books.* (EDA1)
>
> *The SMT are fully involved, giving guidelines and feedback on a regular basis* (EDB2)

HoD1 confirmed that together with discussion of curriculum matters, feedback from supervision of the subject is also provided at subject and phase meetings. In addition to group meetings, SCHB also conducts individual professional conversations on curriculum planning and tracking which is a requirement of the JiP as indicated in the comment by HoD2. She commented as follows:

> *We hold regular phase meetings and meet with individual teachers. Curriculum support is given to teachers in planning and tracking*. (HoD2)

EDB3 confirmed the support provided by the SMT to educators in lesson planning and curriculum coverage. Furthermore, EDB3 and EDB1 corroborated that the HoDs have designed trackers for the other subjects besides mathematics to help educators track their curriculum coverage. Educators at SCHB also received assistance in resolving problems or queries; and monitoring the implementation of the JiP and providing guidance. SCHB has also introduced a "mentorship programme" (HoD2; P2), in which peers are supporting each other to improve their teaching. This is consistent with the theory of action which recommends 'learning in context' where opportunities are created at the school context for individuals to learn from each other (cf. 2.2.2).

In contrast to the responses at SCHA and SCHB, some educators at SCHC asserted that the HoDs did not provide them with any support, unless they requested it. The indication was that no one-on-one meetings are conduct between educators and HoDs, and that HoDs would provide support if and when requested by an educator. This is evident in the comment by EDC2:

> *Supervisors do not conduct one-on-one meetings with teachers … My HoD would only explain if there was confusion or uncertainty*. (EDC2)

In contrast, EDC3 made the following statement which contradicted that of EDC2:

> *We receive support from the SMT. They provide us with curriculum trackers and planners. They also conduct one-on-one meetings*. (EDC2)

While EDC2 indicated that HoDs at SCHC did not support educators adequately, EDC3 found the HoDs to be very supportive. This inconsistency in support to educators at the same school left the researcher a bit confused. HoD3 however confirmed providing support to educators by ensuring

that they receive a printed copy of the resources that were provided on a disc. Furthermore, HoD3 also mentors educators that experience challenges in understanding the resources. The reason for the discrepancy in views, was the fact that EDC3 is in the Foundation Phase and they have implemented the programme fully, while the other two educators are in the Inter/Sen Phase, which are not strictly following the JiP. Not all supervision protocols are adhered to as in the FP. This lack of adequate individual support to educators from grades 4-7 is a concern, as educators that do not ask for help will be left to their own devices. This goes against the intentions of the JiP. The programme by developing HoDs in instructional leadership, expects them to be a support structure to educators at schools together with the principal.

Principals also provide support their educators and HoDs. P1 stated that has a representative of the department of education, it is his responsibility to support educators through meetings, workshops, provision of resources and by monitoring their work. According to P2 staff and SMT meetings are conducted, where curriculum coverage is a standing item on the agenda.

This is evident in the following statement:

> *As a department representative, I am expected to support educators by monitoring at all levels. I conduct workshops and one-on-one meetings with my HoDs. I hold staff meetings once a week and SMT meetings at least once a week where we discuss curriculum coverage.* (P1)

P3 ensures that the educators at SCHC have all necessary resources for implementing the JiP and makes time allowances for educators who are behind in their work. P3 commented:

> *I collect the disc and USB with the materials timeously. I access my private computer and printer to download and print the material and I allow extra time to educators to prepare and compile resources.* (P3)

P1's efforts at conducting one-on-one meetings with educators was not received in the manner in which it was intended.

> *I also started conducting one-on-one meetings with my educators to support them in any personal and work-related matters, but they looked at it negatively.* (P1)

P1 explained that the intention of the one-one-one conversations with educators was to motivate and support them by unearthing problems which may be affecting their performance, but educators considered it to be an infringement on their privacy.

All principals mentioned using the IQMS (Integrated Quality Management Systems*),* in which educators and the DSG (Development Support Group) identify areas for development. From these, topics are isolated for staff development workshops.

The responses of educators, HoDs and principals indicate that educators are supported at schools in the execution of their duties by HoDs and principals and by their peers. Support is provided in implementing the JiP to cover the curriculum adequately. HoDs supervision and IQMS reports, are used to identify areas in which educators need support. Most support to educators is provided at group meetings and workshops. Educators at SCHC indicated the need to more support from HoDs.

b. District level support

Besides support from the SMT, educators and the SMT need support from the DBE to ensure that programmes are implemented effectively. This support is usually in the form of resources, training and monitoring. The participants confirmed that the KZN DoE has been supportive in the provision of resources and training opportunities to educators and managers at schools in the district. All three schools reported that the KZN DoE provided training at workshops to the SMT in instructional leadership and to educators on the content skills. The following comments are indicative of this:

> *There was workshops and training provided by the department.* (EDB1)
>
> *DBE gave us training. Workshops were provided in various subjects.* (P2)
>
> *They also provided support in terms of curriculum trackers for mathematics.* (EDB1)
>
> *They also gave us resources to implement the programme*. (P2)

However, the researcher learned that the support from the district in terms of monitoring and mentoring has been inconsistent or even non-existent. Some participants mentioned that the subject advisors and department officials have not been to their schools to monitor the implementation of the JiP.

> *Monitoring of curriculum coverage by the district however using the monitoring tools as never been conducted by the subject advisors*. (EDC2)
>
> *Besides the training that was provided, the department officials have not been to the school to monitor the implementation of JiP and provide support*. (HoD2)

According to DBE (2009), subject advisors should be the intermediaries between curriculum policy and implementation in the classroom. This implies that they should play an important role in providing support and guidance to educators in their classrooms, as they have direct contact with them.

Subject advisors' visits to schools to check on the state of their specialist subjects was inconsistent. While one school had received moderation by the English, social science and mathematics subject advisors within a two-year period, the other two schools had received none. Schools reported having visits by circuit manager approximately twice a year to check on results and curriculum coverage. The mathematics subject advisor visited SCHA for developmental purposes and later for moderation of grade 7 mathematics. At SCHC, the initial implementation of JiP was monitored once and since then there have been no visits by the subject advisors as confirmed by HoD3.

> *The department of education had workshops for educators and SMT. When the programme was introduced there were people who visited schools to monitor if we were coping.* (HoD3)

When asked what other or alternate support was required for the successful implementation of the JiP, the majority of participants requested a reduction in class sizes; greater parental support; better resources, including improved infrastructure in the schools and a reduction in SMTs and educators' workloads.

With regards to the reduction in class sizes, EDA3 explained that this would improve discipline and decrease the amount of marking. EDC2 and P3 also indicated how the large classes affected the discipline and prevented educators from giving learners individual attention. Participants wanted support from the DBE in the reduction of class sizes. Results of a study on the effect of class size on teaching and learning revealed that principals and educators were of the opinion that the educator to pupil ratio of 1:40 was too large. They recommended it be reduced to 1:30, as they attributed large class sizes as having an adverse effect on supervision and discipline. The individual differences of learners could not be catered for adequately. Marking and provision of resources were also negatively impacted (Wadesango, Hove & Kurebwa, 2016). This is consistent with the remarks of the participants in this study. They therefore wanted support from the DBE in this respect.

Parental support, with homework and revision of work for tests and examinations was lacking. This was emphasised by the following comments:

> *The DBE must find some way to get parents to become more involved in what goes on at schools. Parents do not assist their children with their homework. They don't even check the messages that go home from school. We can only do so much at school.* (EDA1)
>
> *It would be nice if the department also educated the parents on the changes that they introduce in schools … We receive very little support from parents with regards to their children's work … Parents need to be more responsible and monitor what their children*

do at home … It's becoming impossible to monitor homework because learners don't do their work. (HoD2)

These comments bring up many issues relating to parental involvement. Participants believe that parents should be educated on the changes that are being implemented in schools.

Studies show that the partnership between school and parents used to be fundamental to the acquisition of student achievements and outcomes and developed institutional duty (Karim, in Ökten, 2016).

With regard to resources, schools needed increased funding to purchase resources and requested that more schools be built in urban areas, as there is a problem of overcrowding, which is negatively affecting performance and morale of educators.

More schools need to be built in the suburbs because our classes are overcrowded. There is an influx of children from rural areas to the suburbs … not enough schools to cater for this influx. Both the learners and the educators end up paying the price. Educators struggle to teach and they are demotivated. (P1)

The funding to schools must be increased so that we can purchase more resources. The allocation to schools is not enough to ensure that each learner has a textbook. (P2)

P3 emphasized the need for improved infrastructure at her school.

We have too many learners and our school is small. We need more classrooms and better facilities at our school. (P3)

In addition to infrastructure and reduction in class sizes, P2 requested support with increased funding to schools as school fees were not coming in.

HoD1 and HoD3 reflected on the heavy workload that they carry and requested that the DBE look into a reduction in their teaching schedules and hours so that they have more time for the supervision and monitoring of the curriculum. The response from HoD1 sums up what HoDs feel about their workload:

I would say that HoDs workloads need to be decreased. We have to teach almost the same as L1 educators according to the PAM (Personnel Administrative Measures) document and also supervise the work of nine educators and approximately…. 270 learners each. Besides that, there are many other admin duties that we have to do. Even if the principal reduces our load, he is questioned by the educators. It would be good if the HoDs teaching hours is reduced and this is reflected in the PAM document. (HoD1)

EDB3 stated that more support is needed in terms of training in mathematics pedagogy. More specifically on the mathematics content and teaching strategies.

> *The department always brings about changes but does not provide us with adequate support. We need additional resources to teach maths like concrete shapes and counters etc. also, more money should be invested in training maths teachers because children struggle with the subject.* (EDB3)

P3 also pointed out the need for additional support from the subject advisors to mathematics teachers in the teaching of the subject. P2 emphasised the need for more ongoing training and questioned why union members had to pay for courses and workshops held by unions. He also recommended the formation of clusters for schools to network with each other and share their expertise and resources.

From the responses, it is evident that schools need more support from subject advisors in terms of school visits to monitor the implementation of the JiP. Support from the district in the form of resources are viewed as very beneficial in implementing the JiP. Other areas in which support is required, is in the improvement of infrastructure, support from parents in the education of their children, reduction in the teaching load of HoDs, improving poor discipline of learners and reduction of class sizes.

4.3 PRESENTATION OF FINDINGS FROM DOCUMENTS.

4.3.1 HoD Supervision File

The role of the HoD in improving curriculum coverage, is to track the curriculum coverage of educators and learners (cf. 2.2.6.3). Special attention was paid to supervision management plan, supervision reports, minutes of meetings (phase, subject and one-on-one) and reporting to the principal. HoDs at all three schools have a supervision file. All of these listed documents were available at one out of the three schools. At SCHA there were no minutes of one-on-one meetings. At SCHC the tool for reporting to the principal was not available. Minutes of subject and phase meetings were not available in the HoDs' files but rather in a minute book which was housed in the administration office. The minutes revealed details of the discussions on curriculum coverage from phase and subject committee meetings. The minutes at SCHC revealed that the shortage of workbooks for the JiP was discussed. Educators also brought up issues on the challenges that they

experienced with the teaching of more than one aspect on time in the same lesson, and the rapid pace at which they had to cover the content.

At SCHB, feedback was given to the educators that did not attend the JiT training at the mathematics subject meeting. The frequency of meetings at each school was not the same. SCHA and SCHC conduct phase and subject meetings once at the beginning of a term while SCHB has meetings twice a term. All HoDs have a supervision management plan in their files. The names of educators being supervised, the activities being supervised and the projected dates for the supervision are planned in advance by the HoD. The activities that are supervised are lessons, learner books, educators' files (lesson preparation, assessments, marks). These are conducted twice a term at SCHA, SCHB and once a term at SCHC. Supervision reports for these activities are available in the HoD files. The reports bear the signature and date of the supervisor and the educator. On closer inspection, the reports reveal that HoDs are not giving constructive criticism that will develop the educator instead the report is more compliance based (Is this available? Does it comply with the norms?). HoD1 had evidence of giving an educator more time to update her record books. The HoD at SCHB also identifies activities that can develop educators in areas in which they require support. A copy of each educator's development plan is available in the HoD's file. Evidence of this support to each educator in the form of minutes is also available in the HoD2's supervision file. Furthermore, SCHB has a peer support structure where educators are paired according to the subject areas. The senior teacher mentors the junior teacher in both curriculum and administrative matters. The HoD maintains records of support meetings that are conducted with the educators in her phase. It is clear that a supportive environment is created at SCHB, which caters for curriculum issues through staff, phase and one-on-one meetings and through staff development workshops.

An analysis of HoD3's supervision file provided evidence in support of her claim that she supports her educators. The evidence was in the form of phase meeting agendas and minutes of meetings with her educators in the Foundation Phase.

From the interviews and the analysis of the HoD files, it is evident by the absence of minutes of one-on-one meetings that two out of the three schools are not engaged fully in individual conversations around curriculum coverage. Although HoDs are aware that they need to conduct one-on-one meetings with the educators in their departments, they are unable to do so because of time constraints and a heavy workload.

4.3.2 Educators' Files

According to the theory of change informing the JiP, for the learning outcomes to improve, there needs to be an improvement in curriculum coverage (cf. 2.2.6.3). Curriculum coverage is viewed by the developers of the JiP as the reason for the poor performance of learners in schools in KZN. The emphasis of the programme therefore is on improving curriculum coverage (cf. 2.2.6). The role of the educator in the implementation of the JiP is to ensure that they are adequately prepared to present the lessons, assess learners and cover all the topics for the year. To help the educator cover the curriculum adequately, they have been provided with trackers, planners and exemplars (Mabaso, 2016; Mlambo, 2014 & Metcalfe, 2017).

When analysing the educators' files, the researcher was looking for evidence of lesson planning and tracking of curriculum coverage to support or refute their responses in the interviews. From the analysis of the educator files, the researcher was able to ascertain that the educators at all three schools are implementing the JiP in their practice. All educators were using the tracker to track their curriculum coverage. Start and end dates were recorded in the tracker for the classes that were taught. Educators, according to JiP, are also required to reflect on their teaching. They can do this by maintaining a journal or use the specified section on the lesson preparation sheet for educator reflection or complete the section in the tracker. However, from the analysis of the educators' files, it is clear that the area that is not completed properly in the tracker is the reflection. Reflection is either done inconsistently or is completely neglected. At all three schools, some lessons are reflected upon, while others are not. Educators at all three schools do not assign enough importance to this significant aspect of the JiP. The presence of a development plan in the educators' file at SCHB is an indication that the educator and HoD are engaged in activities and conversations to identify areas in which the educator needs support.

Educators have lesson plans in their files which are completed according to the planner. All aspects indicated in the planner are catered for. InterSen educators at all three schools are utilising the lesson plans provided by the district. There was also evidence of assessment tasks for learners in the educators' files. These corresponded to the assessment policy for the subject with regards to the form of assessment, the topic, activity and mark allocation. Educators are recording learners' performance on mark sheets generated from SASAMS. In this respect, all participants use the same mark scheme as all use the same administration system. Two of the three assessments that were analysed, reflected the use of the exemplars provided in the toolkit to assess learners. This is consistent with EDB3 comment that she uses the assessments from the toolkit to assess learners. Educators are conducting analyses of the performance of learners work on analysis sheets which

are created by each of the schools. Remedial lessons are planned according to analysis at SCHA and SCHB and evidence these are in the educators' preparation files. A cross reference of the learners' exercise books showed that remediation is done at all three schools but the educator at SCHC did not have a lesson plan for it.

4.3.3 Work Books

The KZN DoE has made the Jika iMfundo Programme workbooks available to foundation learners at schools in the two districts doing the JiP (2.2.6.2). The DBE provides the DBE workbooks to all grades in the primary schools for mathematics. From the researcher's analysis of these workbooks, it is evident that educators at SCHA, SCHB and SCHC are all making use of the JiP learner books in the Foundation Phase. None of the schools however allow their FP learners to write in the workbooks as the line spacing is not conducive to their size of script. This is consistent with the data provided at the interviews. The instructions in these workbooks are bilingual - in English and in isiZulu as stated by educators in the interviews. There is evidence of marking by the educators of the activities done by learners in they classwork books, on a regular basis.

Learners in the Intermediate Phase and Senior Phase use the DBE workbook for mathematics. On examining a sample of three books at each of the schools, the researcher found that at all three schools there is maximum use being made of the workbooks. The books are marked by the educators at SCHB and SCHC and there is evidence of corrective work done in pencil at SCHA. Work is dated and at SCHB they also indicate if the work is done as homework. At SCHA, the book that was analysed, bore the date stamp and signature of the principal. This is indicative of supervision of the educator's and learners' work by the SMT. All three schools allow learners to do their work directly in their DBE books. At SCHA, the educator indicated in the interview that the principal had recently instructed the educators to have learners write answers in their exercise books so that the workbooks could be retained for the following year if there are any shortages.

4.3.4 Learner Exercise Books

The purpose of the analysis of learners' exercise books was to determine if educators were covering the curriculum adequately according to the curriculum planner and tracker. From the analysis of the books it is evident that great strides have been made in curriculum coverage. There was convergence of data from planning, lesson observation and the learners' activities. Educators at these schools are covering the content as required by CAPS, they are doing more than the minimum required activities for the week. Learners' work is marked consistently at SCHB in all phases and constructive feedback is provided. Informal tasks are marked and marks are allocated.

In the InterSen Phase, the homework which is completed in the same exercise book as the classwork is also controlled. All work is marked in pencil by the learner and corrective work is completed in pencil. Alternate sets of work are marked in detail by the educator. At all schools in the study, the FP learners' exercise books are marked by the educators and feedback is provided on a daily basis. Learners also engage in corrective work. The area for concern however is the lack of consistency in control of learners' books in the IP at SCHA. Large ticking across the learner's work did not indicate that the educator was checking with the intention of providing constructive feedback. There were many activities that were not marked by the educator or corrected by the learner.

4.4 PRESENTATION OF FINDINGS FROM LESSON OBSERVATION

The researcher's observation of educators' classroom practice revealed information that was mostly consistent with educators' responses in their interviews about planning for and tracking of curriculum coverage. During lesson observation the following aspects/themes were preselected: lesson planning and preparation (how lessons were planned using the curriculum planner and lesson plans); teaching and learning strategies (are the strategies provided in the planner being effectively utilised to present lessons?); learner teacher support material (are educators using a variety of resources in their teaching?); activities (are the educator and learner activities consistent with the planning?) and assessment(are the type and number of assessments in line with the tracker and CAPS?)

- ***Lesson planning and preparation***

The first observation made with regards to educators' roles, is that the educators that were observed prepared their lessons in advance according to the JiP curriculum planner before entering a classroom. FP educators use the planner and tracker to plan lessons while InterSen educators have lesson plans provided to them by the district. Although lessons plans are provided, educators still need to be prepared to present the lessons. This requires them to plan their questions, prepare resources, organise the classroom etc. The lessons that were taught at the three schools, corresponded with their lesson plans. The topics and content that were taught were prescribed in the JiP tracker and planner and the CAPS policy document. Educators at SCHA and SCHB, followed the time allocation for aspects to be taught -these included, mental mathematics, correction / reflection on homework, lesson content, class activity, homework (cf. Table 2.5). The duration of the lessons at SCHB and SCHC was 60 minutes - at SCHA, the time was adapted to a

45 minute period - and the sequence of the lessons provided in the planner. The lesson plans also made provision for enrichment and remedial work. Activities were graded at SCHB to cater for the ability levels of learners. In essence educators were well prepared as they made use of the lesson planner from the educator toolkit to plan adequately.

- ***Teaching and learning strategies***

The findings reveal that not all educators are following the strategies provided by the JiP to present the content to learners. While some efforts are made to involve learners in the lessons, it is not very effective. Although educators at SCHA and SCHC had resources to support and elucidate concepts, they did not make adequate use of them and they eventually spent more time at the board, resorting to the chalk and talk method. In one lesson on time, the mental mathematics activity involved mindless repetition and thereafter the educator did correction of the homework, followed by and explanation of the concept at the board. A clock was used but the educator did not involve the learners by getting them to solve problems relating to time. One educator was extremely well prepared and delivered the lesson on polygons confidently. The use of a variety of tactile resources, videos, charts and worksheets allowed for active engagement of learners in their learning. Learning took place through problem solving and deduction.

In general, however, educators at SCHA and SCHC are not making mathematics interesting by using a variety of resources. While the educator from SCHB made use of a number of resources like the concrete shapes, videos and charts to teach a lesson on polygons, the educator from SCHB used a chart, textbook and the chalkboard, and the educator from SCHC used a worksheet, the textbook and the chalkboard as resources. This is a worrying observation as resource templates are provided in the toolkit for educators to copy for learners. These are also listed in the lesson plans but are not used adequately in the lessons.

- ***Learner teacher support material***

Educators are utilising the curriculum tracker to track curriculum coverage. The lessons are planned in accordance with the planner. There are lesson plans provided for the InterSen Phase. These are very effective as they cater for all aspects of the lesson and provide time frames and strategies for teaching. Effective use is not being made of the resources that are made available in the toolkit for the teaching of mathematics. Two out of the three educators did not use the strategies in the planner for teaching. They used their own methods and explanations of the content. The workbook is used for class activities at some schools and only for homework at others. The FP

educators at SCHB use the workbooks effectively. All the examples given to learners are from these books. Effective use is not being made of the workbooks.

- ***Activities***

Activities are given from the JiP workbook in the FP at SCHC. In the InterSen, the DBE activities are given as homework at SCHA and the class activities are from the textbook. At SCHB the class activities were from the DBE workbook and learners also did activities from worksheets which were prepared by the educator. Homework activities were given from the workbook. The activities provided at all schools were linked to the topic taught and corresponded to the lesson plan. Homework activities were also given at the end of the lesson. The homework activities were not on new content but were based on the concepts taught in that lesson.

- ***Assessment***

According to the CAPS curriculum, both informal and formal assessments should be conducted in mathematics as in all other subject. These activities should be marked and marks should be allocated. The marks may be recorded but do not count for promotion purposes. This is not done in all schools. At SCHA there is no evidence of informal assessment in the planning and also in learners' books. At SCHB at least three activities for the week are marked thoroughly and assessed informally. The educator at SCHB also records the marks of the informal assessments on a mark sheet. At SCHC although all work is marked properly, there is no evidence of informal assessment (no marks or ratings). Formal assessments are conducted according to the policy for mathematics for the FP, IP and SP across the three schools. These include assignments, tests, projects and examinations. The mark allocations are in line with policy. There is also evidence in the tests of educators including items from the exemplars which are available in the toolkit. All three schools have evidence of analyses of the formal assessments which are recorded on templates prepared by the individual schools.

4.5 SUMMARY

In this chapter, the researcher presented and discussed the data that were collected using the qualitative methodology of interviews, document analysis and observation to ascertain the experiences of educators and managers with the implementation of the Jika iMfundo Programme. The research questions were restated in the introduction as the data were presented and interpreted

under themes that were linked to these questions. The qualitative data analysis process of dealing with interview data were then summarised.

An interpretive paradigm was utilised by the researcher to make sense of the lived experiences of the participants with the phenomenon called Jika iMfundo. The literature study conducted in chapter 2 was utilised in the interpretation of data. Thereafter the data were presented and discussed under the following themes that were derived from the study:

- Preparation for change.
- Views on change.
- Implications of the JiP for teaching and learning.
- The roles and responsibilities of educators and managers in the implementation of the JiP.
- Benefits, impact and sustainability of the JiP.
- Resources and support.

In the main, the findings show that educators were not informed or consulted when the JiP was conceptualised and its development finalised. The facilitators at workshops were not adequately prepared to provide answers to key questions and challenges likely to confront educators. The resources provided for implementation were not adequate in terms of quantity and the support from the district officials was inconsistent. Thus, the implementation of the JiP was beset with many challenges experienced by educators and managers and making institutionalisation of the programme difficult.

In the next chapter the researcher presents a more detailed summary of the study, conclusions arrived at, recommendations for further research, limitations of the study and concluding remarks.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This study was motivated by the need to understand the experiences of educators and managers with the implementation of the Jika iMfundo Programme at schools in the King Cetshwayo District. The study focuses on the preparation of educators and managers for their roles as curriculum implementers and managers and the efficacy of the implementation of the JiP from the perspective of educators and managers in managing and tracking the mathematics curriculum. The positive and negative experiences of the JiP by educators and managers, provided an understanding of how the programme was implemented and whether they considered the programme to be beneficial and sustainable. The study has concentrated predominantly on the challenges that were experienced with the implementation of the Jika iMfundo Programme (JiP), the roles of stakeholders in the implementation process, the preparation of stakeholders for the implementation of change, the support that they received to implement the change and the strategies that were employed by managers to implement the JiP.

This study attempts to answer the following questions: What are the experiences of educators and managers with their preparation for the implementation of the Jika iMfundo Programme? What are the views of educators on the Jika iMfundo Programme in relation to how it improves curriculum implementation and coverage? How effective are the resources provided in improving curriculum coverage? What are the experiences of educators and managers of their roles in implementing the JiP? What are the views of educators and managers on the support provided to them for the effective implementation of the Jika iMfundo Programme?

Through the use of interviews, observations and document analysis, the researcher was able to elicit data that were instrumental in adequately answering the research questions of the study. The key findings obtained from the analysis of this triangulated data were presented in Chapter Four. This final chapter provides a summary synthesised from the findings of the key research questions, under the identified themes. This is followed by conclusions that have been extrapolated from the synthesis of the empirical data which are linked to the research questions. Recommendations from

the conclusions, directed to key stakeholders within and outside schools, on how the implementation of the JiP and future innovations can be enhanced are discussed under the following categories: policy, theory and practice. A framework for the implementation of the JiP and future innovations at schools is provided. Furthermore, recommendations are made for future studies in areas that the researcher deemed merited further attention. Finally, the contributions and limitations of the study are furnished.

5.2 SUMMARY OF FINDINGS

5.2.1 What are the experiences of educators and managers with their preparation for the implementation of the Jika iMfundo Programme?

a. Lack of Consultation and inadequate information on the JiP

Resnich (2000: 858) draws attention to how the incorrect assumption by the "higher echelons" that the planning of change is best left to them while the implementation is the task of the "lower echelons", has often had negative consequences in the implementation of change because the "lower echelons" have the power to block or resist change. Sikes (in Burks *et al.*, 2015) also attributes educators' negative attitude to change, to the fact that they are viewed as mere implementers of change and not consulted on important aspects in the developmental process. On the other hand, Vilche (2017:33) deliberates on how a teacher who had been provided with opportunities for involvement, developed a positive attitude and understanding of the curriculum. Furthermore, the author also cites the case of curriculum change in Greece, which was successful due to the involvement of stakeholders at all stages of planning and implementation.

Educators and managers in this study were not consulted on the decision to introduce the JiP or involved in its development. They therefore had no prior knowledge of the programme until they received information about it from their principals or HoDs. Since educators were not consulted on the innovation, the principal and/or HoD became the main sources of information on the JiP. In a study done on how educators implemented the FFLC, Govender (2013) found that educators were not consulted in the initial stages of the development of the campaign which led to them having a negative attitude about it.

The principals themselves were not consulted and first found out about the JiP from an invite to its launch by the MEC for the province. Not all principals attended the launch, as is expected, as principals have other commitments at school. Therefore, their knowledge of the programme was

limited to what they later heard from their colleagues. Besides the principal being the chief source of information, educators also obtained information about the programme from media reports and circulars from the KZN DoE. The conclusion is that the 'top-down' method is still being used by the DBE to introduce change at schools. This is consistent with literature (Gawe, Jacobs & Vakalisa, 2004; Mâță, 2012), which also revealed that the lack of consultation negatively affects educators' views, acceptance and implementation of change. Educators are not consulted about the JiP nor involved in its development. The information received by educators prior to the development workshops and implementation was insufficient and inadequate and left educators and managers confused as to the nature of this programme and how it would affect them and the learners. Principals became the leading source of information to educators and since their knowledge of the programme was inadequate, educators were ill informed. Lack of adequate information about a change, leads to stress, anxiety and confusion, as felt by the educators in the case study. This negative first experience emerging from the lack of knowledge of the innovation is not a good starting point for any change to be successful, as predicted by the theory of change and the DOI theory (Fullan, 2006; Rogers, 1983;1995).

b. Inadequate practical training for all teachers of mathematics.

The lack of proper preparation in past change initiatives, such as C2005, RNCS, FFLC and CAPS have resulted in challenges in their implementation (Govender, 2013, 2019; Molapo, 2016; Moodley, 2013) Change theories also maintain that adequate training is a requisite for the efficacious implementation of change (cf. 2.2.7.3). Educators and managers were prepared for the implementation of the Jika iMfundo Programme through the provision of training workshops by the KZN DoE. The JiT training was conducted with HoDs and leadership training for principals and deputy principals. Educators training focused on improving their content knowledge in mathematics (Metcalfe, 2017).

The more experienced educators and managers (with more than five years) were content with the developmental opportunities afforded to them by the DBE. They found the training adequate in terms of time, content and facilitation. The younger educators (less than five years teaching experience) indicated the need for more frequent ongoing support and development in the teaching of the mathematics' content. Some educators found the facilitators to be inadequately prepared and therefore they were unable to respond to the questions communicated to them on the programme. SMTs realised that educators needed more training in teaching the mathematics' content proficiently, as the workshops that were provided to them were rushed and insufficient.

Some educators had not received any training on the implementation of the JiP or on the teaching of mathematics.

Annual training for educators is insufficient in preparing them to develop skills in the teaching of mathematics. Facilitators were not adequately prepared and therefore they were unable to provide answers to pertinent questions. The train-the-trainer approach was used. Training was not provided to all educators teaching mathematics at schools since it was not feasible to have the entire mathematics staff absent from school to attend workshops. It might be worth exploring the educators' response to the proposition if the workshops were conducted after school hours, during weekends and holidays, if all educators would attend. From the researcher's experience, as a teacher and member of a SMT, this is highly unlikely, considering the busy schedule of teachers, and the fact that the CAPS two-day content workshops scheduled during school holidays took place on one day only because the second day was cancelled by the teacher unions. Many educators are not prepared to sacrifice their personal time for self-development activities. Schools are not forming "professional learning communities" (Fullan, 2007) so that educators can discuss problems and come up with improvements and solutions.

5.2.2 What are the views of educators on the Jika iMfundo Programme in relation to how it improves curriculum implementation and coverage?

a. Divergent views on the need for curriculum change

The change theory (cf. 2.2.7.2) and DOI theory (cf. 2.2.7.4) emphasise the importance of the change addressing an urgent need in an organisation. The four elements postulated by the DOI theory (cf. 2.2.7.4) of relative advantage, compatibility, complexity and triability, affect how the innovation is viewed by stakeholders. The benefits and advantages of the innovation (relative advantage), whether the innovation is in line with previous beliefs, experiences and needs of the adopters (compatibility), the complexity of implementing the innovation (complexity) and the possibility of testing the innovation (triability) will lead to either positive or negative views on the change. People generally do not accept a change if they do not see the need for it. Change therefore needs to result in improved practice in the workplace (Chen & Hsieh, 2008:73). In the school setting it means developing modern and relevant experiences for learners (Rassekh, 2001) and improved quality of educational institutions which implies efficiency, effectiveness and equity (Thankachan, 2015; 125).

In this study it was determined that educators and managers have mixed emotions about the changes in education. This is mainly due to the fact that since the end of apartheid, and the

beginning of the new democratic dispensation, educators have been inundated with curriculum changes (cf. 4.2.2), which have led to a wariness and cynicism brought on by the failure of previous change efforts.

There is a general understanding among educators and managers that change is necessary on occasion to ensure progress in terms of technological advancement, teaching methods and resources, but these, they believe, should be beneficial to both learners and educators. This is consistent with Dalin's (2005:32) argument that the failure of many innovations is mostly attributed to the lack of representativeness of the needs of learners and educators. Literature (Amimo, 2009; Fink & Stoll, 1998; Patil, 2012) also emphasises how educational change is needed for social reform, curricular changes and improvements in the economy amongst other things. Researchers also concur that changes should be thoroughly researched and developed in consultation with educators, as they are the ones who know what is required at schools. The conclusion is that educators will accept change if they are involved in the change process right from the initiation stage and if they consider the change to be beneficial. This is consistent with literature where researchers have attributed the negative attitude of educators to the lack of consultation (Sikes in Burks *et al.*, 2015).

Most of the participants reacted favourably to the JiP. The general sentiment was that the JiP is good for educators and learners, as it assists with preparation and presentation of lessons, provides exemplars for assessments and thereby facilitates and enhances curriculum coverage. While most of the participants viewed the JiP favourably, there were participants who felt that the JiP does not consider the slow learners who are not allowed to reach the outcomes at their own pace. Managers appreciated the provision of supervision tools which supported them in the management of the curriculum.

b. JiP has positive implications for teaching and learning in the Intermediate Phase and Senior Phase but not so much for the Foundation Phase

If JiP is to be successful in its intentions, then it will lead to: improved curriculum coverage by fully trained educators; improved learning outcomes as learners have adequate opportunities to learn with effective resources; and managers who manage curriculum coverage and support the educators in their classroom practice (Metcalfe, 2014 & 2017; Sayo, 2016; Witten & Makole, 2018).

The general finding is that the JiP has impacted teaching and learning positively. The provision of resources, such as the educator toolkit and supervision tools (cf. 2.2.6.2) have supported educators

and managers manage curriculum coverage adequately. The JiP requires teachers to finish the curriculum by following the lesson plans provided and to use the tracker to track their curriculum coverage (Government of South Africa, 2015; Metcalfe, 2014, 2017). Managers use the tools provided to monitor the coverage of the curriculum by educators and learners. Contrary to literature (cf. 2.2.6.3) that suggests that the SMT are supposed to use the tools to obtain evidence to conduct one-on-one conversations with educators, the study found that not all supervision was leading to professional conversations.

Generally, the following implications of JiP for teaching and learning have been established: educators must use the lesson plans to prepare adequately for their lessons; educators must deliver the lessons according to the planner; and educators must use the tracker to track their curriculum coverage. If educators cover all topics adequately, learners will achieve the outcomes. HoDs must monitor curriculum coverage with the tools provided and support educators deal with issues around curriculum coverage.

According to evidence, the JiP is viewed as a programme that is beneficial to educators but not so much to the learners. It is supportive to educators in curriculum coverage and to managers in managing the curriculum. Educators are supported in the mastery of content knowledge through the provision of content workshops. Educators are assisted with lesson plans and assessment exemplars. Managers have editable templates provided to them for the supervision of curriculum coverage. The FP educators viewed the JiP as not beneficial for FP learners because the pace of content delivery is too quick and it does not allow the slower learners time to understand.

c. Schools experienced challenges in the implementation of the JiP.

No change process proceeds without challenges as shown in various studies conducted in the implementation of curriculum change (Govender, 2013, 2019; Kim, Tan & Talaue, 2013; Maharajh, Nkosi & Mkhize, 2016; Moodley, 2013). Studies done by Maharajh, Nkosi and Mkhize (2016) and Moodley (2013), on the implementation of CAPS, found that educators experienced challenges with the inadequacy of training provided, insufficient resources and support and a lack of understanding of the curriculum which affected the implementation negatively. The number of challenges experienced by the implementers speaks to inadequacies in the planning stage of the innovation. The challenges experienced by stakeholders during the implementation of change may lead to the failure of an innovation or, as argued by Kimonen and Nevalainen (1996), may translate into motivation and determination to learn and develop themselves.

The implementation of the JiP has not proceeded without any obstacles. Educators have experienced challenges with the programme itself and there were also contextual factors which have impeded educators' progress. The following factors have added to the struggles of educators to implement of the programme: inadequate resources; inadequate training; inadequate support from the district; lack of alignment between JiP, CAPS and SASAMS assessments; the fast pace of the JiP; poor discipline of learners; lack of parental support, increased workload and overcrowded classes. This is consistent with the inhibiting factors discussed in literature (Morrison, 1998).

d. Inconsistencies in the implementation of the JiP at the three schools

As expounded by Brands (2015: 1), an innovation is more than just the creation of new ideas, it involves proper implementation and the creation of a culture to sustain the changes. Thus, the implementation phase may involve the use of the resources and approaches and a change of mind-sets (Fullan, in Vandeyar, 2017: 376) as it is the 'testing ground' for the innovation (Khoza, 2013: 8). The JiP which has been advocated as the KZN DoE's major initiative to improve learner outcomes by improving curriculum coverage (DBE, 2015: 4), can only achieve its intended objectives if it is implemented efficaciously. The implementation of the JiP at schools, required educators to utilize the mathematics curriculum tracker and planner to plan and cover the curriculum adequately and reflect on their teaching and learning; HoDs to monitor the work of educators and learners and support educators to improve curriculum coverage; principals and HoDs to meet regularly to review curriculum coverage (Metcalfe, 2014: 42). From the case study, the conclusion is that implementation of the JiP is inconsistent across schools. Schools have divergent understanding of how the programme should be implemented which has led to the programme being implemented fully in all grades in two out of the three schools and not in the other. The programme is fully implemented in the classroom for grades 1-3, in all schools in the study, and in grades 4-7, in two of the three schools. Although schools have implemented the JiP, there are varying degrees of efficacy. Compliance with the objectives and features of the programme have not been fully realised at all schools, e.g. one school conducts one-on-one conversations, has developed trackers for all subjects, and has developed a programme to support educators, the other school does not conduct one-on-one conversations in the InterSen Phase because JiP is not compulsory, but complies with all the requirements in the FP, the third school knows that one-on-one conversations are a requirement but they do not have time to conduct them.

e. Sustainability of the Programme

In order to sustain a change, the resources and support provided must be consistent and ongoing (Anderson, 2010). When a change is sustained it means that it is no longer viewed as an experiment but the implied routines and procedures have been established with the required infrastructure in place (Sembiring *et al.*, 2016). There is widespread use and practices are "embedded" (Anderson, 2010). Morrison (1998) stipulates conditions such as lack of support, limited capacity to sustain the change, lack of interest in and ownership of the change, etc. (cf. Table 2.1) that will inhibit the institutionalisation (sustainability) of an innovation. Mertz and Bartle (2012: 13) therefore intimate that planning and activities around sustainability need to be allocated a place of importance right from the initial stages of implementation. They mention the need for financial and programmatic sustainability as requirements to sustain change. Financial sustainability involves ensuring that the funding streams for the new practice are established, reliable, and adequate. Programmatic sustainability is related to ensuring that sustainable supports are in place to continue effective training, coaching, and performance assessment protocols; to measure fidelity and make data-driven decision for continuous improvement; and to ensure that facilitative policy-making and procedural decisions continue to support full implementation (Metz & Bartle, 2012: 13-14).

From the study, it is evident that the majority of educators and managers at schools are motivated and enthusiastic about the change and are willing to sustain it as long as they receive continued support. According to the developers of the programme, JiP is a sustainable programme as small changes have been made and the resources provided do not require too much funding (Metcalfe, 2017). The researcher believes that with some adjustments to the resources, adequate support from the district and SMT and reduction in class sizes, schools will be able to sustain the JiP.

5.2.3 How effective are the resources provided in improving curriculum coverage?

a. Adequacy of the resources in improving curriculum coverage

The resources needed for the successful implementation of the Jika iMfundo Programme, which includes the teacher toolkit (curriculum planner and tracker) and lesson plans for educators, supervision tools for managers and work books for learners, provided to schools (KZN Government, 2015; Metcalfe, 2017) have been well received. Educators and managers are making adequate and appropriate use of these resources. The teacher toolkits are used for planning and tracking curriculum coverage; supervision tools are adapted and used by the SMT to supervise the curriculum, and learner workbooks are used by learners for class and homework activities. The

toolkit according to Mabaso (2016) is a mechanism for them to reflect on their professional practice.

Learners' workbooks are not adequate in the following respects: the font is too small for Foundation Phase learners; learners get confused because the book is bilingual, and the line spacing is not appropriate for the phase. The importance of the book having bilingual instruction however is in support of the learners whose mother tongue is isiZulu. It may be argued that the language barrier prevents 2nd language learners from reaching their full potential. Therefore, the use of mother tongue instruction in learning non-language subjects. Ristevska, Kochoska, Gramatkovski, and Sivakova (2015) emphasises the importance of the workbook as a source of knowledge in the lesson, for practice and study purposes. The challenge experienced with the inadequate provision of workbooks will undermine its effectiveness in achieving its goals. Schools also do not receive the correct number of workbooks for their learners. This presents a problem to managers who have to source these resources from other schools. The provision of the trackers on a USB device is acceptable to some schools with adequate resources for printing or copying, but not for the other schools which lack such resources.

Educators are making substantial and effective use of the educators' toolkits to plan lessons and assessments and track curriculum coverage. Since the initial introduction of the JiP at the beginning of this study, educators have also been provided with prepared lesson plans. Educators are preparing well, according to the stipulations of the Jika iMfundo Programme educator toolkit. Learners are assessed according to the CAPS policy and a variety of assessment techniques are utilised. Educators make use of these assessment results to assess their curriculum coverage. However, as stated in literature, "curriculum coverage is not simply the 'ticking off' of topics covered. The monitoring of coverage which is defined by what learners learn" (Metcalfe, 2018: 38).

Supervision tools allow managers to collect information so that evidence-based conversations can be conducted around the curriculum coverage. While HoDs are using the supervision tools to monitor curriculum coverage by auditing the work of educators and learners but they are not using the evidence to engage with educators on an individual level on curriculum coverage. This is consistent with data from interviews and from the analysis of their supervision tools. Principals use the tools to audit the supervision done by HoDs. The resources provided to educators and managers are effective, but they have to be utilised properly by all stakeholders. FP learner

workbooks, according to educators, are inadequate because of the small font, narrow line spacing and bilingual instructions.

5.2.4 What are the experiences of educators and managers of their roles in implementing the JiP?

a. Adequate planning and coverage of the mathematics curriculum

Planning for lessons by using lesson plans ensures that educators enforce the "national curriculum which establishes central control and regulates consistency and uniformity across the school system" in their practice (Shalem, Steinberg, Koornhof & De Clercq, 2016: 18). Davenport (in Shalem, Steinberg, Koornhof & De Clercq, 2016:18) also points out that lesson plans are considered to be curriculum resources which can provide a deeper understanding of "subject matter knowledge, pedagogical content knowledge and knowledge of how student thinking develops". From the triangulated data from interviews, observations and documents, the conclusion arrived at is that educators have been greatly guided by the provision of the curriculum planner and tracker in the planning and presentation of their mathematics lesson. All educators were prepared when presenting their lessons. Educators either use the lesson plans provided by the KZN DoE or they prepare their own based on the curriculum planner. Evidence of lesson preparation in their files speaks to curriculum planning and the evidence in learners' books and workbooks of topics covered and assessments conducted is indicative that the CAPS curriculum is being covered adequately in the subject. Observation of the lessons, indicated that educators use the lesson plans as a guide. The steps indicated in the planner are not completely adhered to in the preparation and presentation of lessons. They use their own content knowledge and teaching styles when presenting the lessons. Timeframes are also not strictly followed.

Educators and managers are both responsible for the management of curriculum coverage. The role of the educators is to manage the curriculum by planning adequately and ensuring that the curriculum is covered. This is largely due to the provision of the lesson planner in the toolkit.

b. Inconsistent and superficial reflection on teaching

In order for educators to achieve success in bringing about systemic change, they need to engage in the following activities: Monitor and assess learner performance as per the curriculum policy and design appropriate remediation; Create a positive learning environment; Practice effective classroom management; Communicate about improvement through seminars, newsletters, learning briefs and articles; and Carry out regular 'reflective practice' in relation to the teaching

of the curriculum (Kamanga, 2013 :23). However, educators are not reflecting adequately, or not at all, on their practice and curriculum coverage, which is a requirement (Mabaso, 2016; Metcalfe, 2017). The reflection that is indicated at the end of the lesson plans is inconsistently completed or superficial. It seems to be done for administrative and supervision reasons and not to improve practice.

The tools provided by the JiP for educators to complete in preparation for one-on-one conversations with HoDs are not utilised by educators. The main reason for this, seems to be that educators are not mandated by their managers to do so, as one-on-one curriculum conversations are not conducted consistently and effectively.

c. Curriculum coverage is adequately supervised

The activity of monitoring curriculum coverage has been tasked to the HoDs and principals at school, while the circuit managers are expected to monitor the state of curriculum coverage at schools, by conducting evidence-based conversations with principals (Metcalfe, 2014: 42). The role that needs to be played by HoDs in supporting educators is discussed in literature (cf. 2.2.6) They are required to conduct regular checks of the educators' and learners' work to track curriculum coverage. The relationship between educators and management, according to the JiP needs to change. The focus is now on providing support to improve educators' curriculum coverage and not so much on checking for compliance (cf. 2.2.6). The aim of JiP with these monitoring procedures is to build internal accountability, instead of solely focusing on compliance (Metcalfe, 2018). The action theory also suggests that capacity building should focus on building internal accountability (cf. 2.2.7.3).

HoDs have adapted the supervision tools and are using them effectively to monitor curriculum coverage. The following areas are supervised: educators' preparation for lessons and assessments, delivery of lessons and curriculum coverage by learners. HoDs are in possession of a curriculum supervision management plan (a schedule with names of the educators that they supervise, the aspects that they are supervising and the dates for these activities) for the audits to be carried out. HoDs are submitting reports on the state of curriculum coverage to the principal or deputy principal. Not all HoDs are using this vital opportunity to engage with educators on issues around curriculum coverage. HoDs, at two out of the three schools, do not conduct one-on-one conversations with their educators or these are not done consistently. HoDs are encumbered with work and do not have enough time to conduct these conversations. Some HoDs prefer to conduct meetings with groups of educators, instead of one-on-one meetings, or they do not have sufficient

time to do so. Although some principals are not engaging with HoDs individually on curriculum coverage, curriculum issues are discussed at SMT meetings, phase meetings and subject meetings.

d. Adequate management of the curriculum by principals

The important role of managing the curriculum at school is that of the principal. In order to do this, principals need to review curriculum coverage with the HoDs regularly and act on improving the curriculum at their schools (cf. 2.8). Principals need to ensure that they create a conducive environment for educators to teach effectively, with all the necessary resources and support, and for learners to learn. The instructional leader engages in a number of activities that foster this favourable environment (DoE, 2008; Van Der Berg *et al*., 2011).

Principals in this study are managing the time, human and financial resources adequately to manage the curriculum. There are many signs of effective leadership. Principals have ensured that] all the subjects that are catered for at their schools are allocated the correct times] as per CAPS. The resources needed for teaching and learning are budgeted for and made available to educators. Principals are proactive and come up with solutions for the shortages of workbooks and ensure that the acquisition of the Jika iMfundo Programme trackers does not remain a challenge.

Although principals are conducting IQMS and SSE, not all schools have a formal staff development programme. Principals of these schools are not using the evidence from these activities to improve the capacity of their educators. Principals ensure that teaching and learning is the core business of the school and other activities do not take time away from this. Principals are aware of the state of curriculum coverage at their schools. They ensure that HoDs are engaged in curriculum supervision by monitoring the audit programme at their schools.

e. Strategies adopted by principals in managing the implementation of JiP?

The management of change in an organisation, involves planning and implementation of major change steps to attain the goals of the organisation, maximise the impact of the change on employees and assist leaders and staff to make the new ways a routine in their practice (Barret, 2012:1). SMT are responsible for managing change within the school. They therefore have to cope with its complexities as change implies new ways of doing things (Wallace and Pocklington, 2002: 8). The acceptance and support for the change must be actively portrayed, so that it can be observed by the employees (Prosci, 2016: 2). Principals, as department officials, are implementing the JiP mandated by the KZN DoE at their schools. They have received training on instructional leadership and are committed to creating a conducive environment for change to be implemented

at their schools. Principals have encountered resistance from educators in implementing the JiP. Principals have utilised some common strategies, to deal with challenges and to ensure that the JiP is implemented successfully at their schools. It has been determined that there are similarities between the strategies adopted by principals in the study, with those discussed in literature (cf. 2.8.4) which are suggested by various authors (Cavanaugh *et al.*, 2014; Dayson, 2016; Morrison, 1998; Richardson, 1998).

Principals understand their roles and accountability in the management of change. They are in agreement and supportive of the change and are making every effort within the context of their schools, in spite of many challenges, to ensure that the JiP is implemented successfully and institutionalised. With regards to the training and knowledge of change, principals need to familiarize themselves with any innovation and keep abreast of the latest developments. More needs to be done to support educators in the area of staff development. According to JiP, the school needs to be the platform for building the capacity of educators.

5.2.5 What are the views of educators and managers on the support provided to them for the effective implementation of the Jika iMfundo Programme?

a. Educators need more support through one-on-one meetings

The DBE considers the provision of support to teachers, principals and the district in curriculum coverage, the only way to improve teaching (Mlambo, 2014). Support to teachers for the implementation of the JiP needs to come from HoDs and subject heads while districts need to support schools (Metcalfe, 2014: 42). Support to educators can only be provided through supervision of curriculum coverage in which the SMTs can identify pedagogical problems and support educators to resolve these (Metcalfe, 2017: 38). Monitoring, guiding and supporting are the core duties of the SMT (Witten, 2016: 3).

Studies have shown that educators are receiving support at school from their SMTs, in the form of workshops and other developmental activities, which are based on the needs of educators. The IQMS and SSE are utilised to identify areas requiring attention and development. The staff development team, together with the SMT, develop staff development activities based on the areas identified (Jaca, 2013:14).

HoDs need to support the educators by listening to them, communicate with them, assist them and share ideas, while being flexible, accessible and sensitive (Ibid.:32). The HoD needs to support educators by coordinating assessment, homework, written assignments, etc. of all subjects in

his/her department; coordinating and guiding teachers on the latest ideas and approaches on the fields within which their subjects are based; by guiding inexperienced staff members and control the work of educators and learners in their departments (Mthiyane, Naidoo & Bertram, 2018: 2). Furthermore, they need support from the HoDs to improve curriculum coverage and deal with problems related to curriculum coverage (Metcalfe, 2018). HoDs are also required to conduct evidence based professional conversations with the educators around curriculum coverage with the intention of providing developmental support (Metcalfe, 2017: 50). They have been provided with supervision tools for scheduling supervision activities, collecting evidence and conducting professional conversations (Mabaso, 2016).

The findings reveal that although curriculum coverage is discussed at subject, phase and staff meetings where problems are identified and solutions are arrived at through collaboration, educators require more support from their HoDs through the facilitation of one-on-one professional conversations. The reluctance of some HoDs to conduct one-on-one meetings with educators is largely due to the fact that they have a heavy workload and there is not enough time in the school day to conduct individual meetings (cf. 4.2.8b). The JiP has not taken into consideration the already burdensome duties of the HoD which include teaching, supervision of educators and learners' work and other administrative duties (Mthiyane, Naidoo & Bertram, 2018: 2).

Principals are supporting educators by monitoring the work of the HoDs, analysing reports and providing developmental activities. They also collect the resources from the circuit office and make these available to the educators. From observations at schools, the researcher also found that many informal meetings and discussions are held on curriculum issues between educators and HoDs, and HoDs and senior management, but these are not formally recorded.

b. Lack of support from the district

Districts, as intermediaries between National and Provincial Departments on the one hand and schools on the other, are required to implement curriculum policy by monitoring progress, as well as to provide support to schools struggling with curriculum management (Mc Lennan, Muller, Orkin & Robertson, 2018: 3). The district is a crucial part of the infrastructure with respect to leadership development, capacity building, mobilization and use of data, and intervention (Fullan, 2016: 3). The goal of the JiP is to develop new, more professional (cooperative rather than bureaucratic compliance) ways (behaviours) of supporting schools (Mc Lennan *et al.*, 2018: 1) by the district.

Subject advisors are governed by the Guidelines on the Organisation, Roles and Responsibilities of Education Districts (2011) according to which they are expected to workshop teachers, continuously monitor the work of the teachers and the performance of learners (Tatana, 2014: 1). Whether districts are supporting the schools effectively through monitoring, will depend partly on the availability of resources (Khosa, Mashamaite & Ntantiso, 2013: 91). Subject advisors who have a high number of schools to support experience difficulty in allocating their time effectively. Furthermore, the high ratio of schools to subject advisors - ranging from 1 to 30 to 1 to 100 - makes it impossible to provide classroom support and monitoring (Ibid.: 93, 94). The provision of five subject advisers for 470 schools in Foundation Phase in the King Cetshwayo district, emphasises this challenge with staffing experienced by districts (Mc Lennan *et al.*, 2018: 9). Khosa, Mashamaite and Ntantiso (2013: 96) emphasise that "no tangible reform of or improvement in the education system will take root in the next few decades before the South African government has made some hard decisions about beefing up the districts".

The general feeling amongst educators and managers is that the KZN DoE has provided support in terms of resources and training which they have welcomed. The support from subject advisors with regards to monitoring is non-existent in some schools. While one school was visited by subject advisors for mathematics and other subjects, the other two schools received no such visits, so the selection of schools for monitoring and support has been inconsistent. The JiP support to the district was also intended to build the capacity of circuit managers (CMs) to provide curriculum support to principals and schools. The CMs are required to conduct on site visits to discuss learner performance and curriculum matters with the principal. They have to use the monitoring tools that they developed to engage with principals on curriculum issues. These curriculum conversations are evidence based and are intended to support the principal improve curriculum coverage at the school (Mc Lennan *et al.*, 2018: 2). While the CM has been to the schools in the study to provide support based on the monitoring tools, these have been infrequent. In some instances, an entire term has gone by without a visit. Principals did however indicate that there is regular communication between themselves and the CM via social media and telephone.

5.3 CONCLUSIONS

This study explored the experiences of educators and managers at three primary schools in the King Cetshwayo district of KZN, with their attempts in using the Jika iMfundo Programme to improve curriculum coverage. Since the implementation of the JiP implied changes in the

activities around curriculum coverage, which involved educators and the supervision of curriculum coverage, which concerned the SMT, the researcher used direct semi-structured interviews, observations and document analysis to elicit data on their experiences

The following conclusions have been drawn from the findings:

Educators feelings about change in education in general are diverse ranging from approval, to ambivalence, to strong disapproval. The negative perspectives were influenced by the challenges that educators and managers experienced with previous curriculum changes such as C2005, OBE and RNCS. Lack of involvement of the stakeholders at schools in these past curriculum changes aslo contributed to the negative attitude towards changes in education. Consultation and the provision of adequate information to stakeholders at schools, on change efforts is needed to develop a positive attitude and acceptance of the change, and prevent any confusion about the change.

The views of educators and managers on the JiP has been generally positive with educators and managers welcoming the support provided by the JiP in improving curriculum coverage. Prior to the JiP educators had problems completing the content loaded CAPS curriculum. The provision of resources such as the toolkit and workbooks have been helpful in covering the mathematics curriculum. Workbooks are used effectively for class and homework activities. The standardised curriculum supervision tools are utilised to supervise educators' curriculum coverage. Previously HoDs did not have a standardised tool for supervising the curriculum as schools were responsible for devising their own. All the relevant aspects such as planning, teaching, recording, assessments and learner performance are supervised by the HoDs. The reporting tool is used to report curriculum coverage in the subject to the principal. Training provided to the SMT in curriculum management equipped principals with strategies and skills to manage the curriculum effectively. Educators content training as been beneficial in improving their skills in teaching mathematics.

Although there is a generally positive attitude towards the JiP, its implementation has not been without any challenges. Not all educators have been adequately prepared for the implementation of the JiP. Some educators have not received any content training. Inexperienced educators need more ongoing practical training and capacity building opportunities to teach mathematics confidently. Intermediate and Senior Phase managers and educators view the JiP more favourably than the FP educators and managers. This is mostly due to the fact that FP educators consider the JiP mathematics curriculum tracker to be too fast paced for the learners in the phase and the combinations of concepts to be taught in the same lesson is confusing to learners. While hard

copies of Toolkits were provided to schools in the initial years, they are now received on a memory stick. Some schools are experiencing challenges printing these. Challenges experienced with resources are related to shortages of workbooks. The bilingual instructions, font size and line spacing of the FP Jika iMfundo Programme workbooks, make it less user-friendly for learners in the phase.

Support provided at school level and from the district in the implementation of the JiP has been inconsistent and inadequate. While curriculum coverage is being adequately managed at schools with the use of the supervision tools, HoDs do not have adequate time to conduct individual evidence-based conversations with educators. Lack of proper communication and monitoring by the district has led to inconsistencies in the implementation, with some schools not implementing the JiP in all phases. Subject advisors are not conducting school visits to support educators with the curriculum coverage as they have too many schools to supervise. Parental involvement in the education of their children is inadequate. Educators and managers need parents to be more involved in attending to discipline issues, non-completion of homework and in preparing their children for tests and examinations. Educators also experience problems teaching large classes where discipline of learners, providing adequate support to learners and general administration becomes a challenge. The implementation of the JiP has resulted in increased administrative duties for educators and managers. In addition to their normal administrative duties educators now have to complete the tracker and reflection, mark workbooks and prepare for one-one-one conversations.

While schools experienced challenges with the implementation of the JiP, they were also able to exhibit best practices. Educators are planning adequately and tracking their curriculum coverage. Managers are adopting management strategies to manage the implementation of the JiP. Some schools are using mentorship programmes to foster collaboration and development. Schools are collaborating with each other to acquire resources and information. However, some educators are not making effective use of the toolkit in planning and presenting lessons. Teaching strategies adopted do not involve maximum participation by learners and are more teacher-centred. Educators reflection on their teaching and on curriculum coverage is inconsistent.

Through the study, the researcher was able to gain a better understanding of how change is implemented at schools. It became clear that mapping out the change process by change initiators external to schools and managers of change within the schools is not in itself adequate for the successful implementation of change. Until the contextual factors at schools and the general

teaching conditions at schools are improved, many change efforts will be discarded as challenges lead to low morale and frustration among educators. Challenges need to be addressed to move implementers of change from a mind-set of compliance to mandated change, to internal accountability and acceptance. Theoretically the assumption that outcomes will improve if curriculum coverage improves is by itself unsubstantiated. This theory needs to be qualified by the inclusion of improvements, to the contexts at schools and the working conditions of educators and managers. While principals have attempted to attend to some of the challenges faced at schools, with the implementation of the JiP, like the acquisition of resources and poor discipline, others involving policy changes and revision of resources need to be addressed by the developers of JiP and DBE, to ensure the efficient implementation and institutionalisation of the Jika iMfundo Programme.

5.4 RECOMMENDATIONS

From literature and findings from the present study, the researcher recommends strategies to schools, educators and the DBE, with the intention of improving the implementation of the JiP and future change efforts at schools. The recommendations are in the following focus areas, namely policy and legislation, theory and practice.

5.4.1 Policy

The DBE has made a number of policy changes and efforts to improve the state of South African education system over the years, namely the introduction of CAPS, Schooling 2030 and, most recently, the JiP in KZN. There will however always be a need for improvement in the future but future changes must only be introduced when absolutely necessary. There needs to be consultation with educators before a change is introduced. Educators need to feel that their input is valued. They would be more willing to implement and sustain a change that they were instrumental in developing. Changes need to be documented and then disseminated to educators by the education departments that are introducing the change. This is necessary as verbal information filtered down through principals may either be lost or miscommunicated. Clear guidelines and procedures need to be provided, that leave educators without any doubt on how and what should be done to implement a change in practice. There is a need to ensure that the JiP, CAPS and the SASAMS are in sync when it comes to assessments and mark allocations. The DBE, unions and SGBs need to collaborate to arrive at workable solutions to the challenge of poor learner discipline and violence at schools, which is adversely impacting the culture of teaching and learning. In order to

improve the implementation of the JiP, attention must be given to reducing the teacher-pupil ratio. Large class sizes present a challenge to educators (cf. 4.2.9b. Wadesango *et al.*, 2016). The reduction in class size can be achieved by putting a mechanism in place to prevent department officials compromising the quality of education at schools by insisting on placement of learners in already overcrowded schools. To facilitate adequate and developmental supervision of curriculum coverage, by HoDs, their teaching load should be reduced so that they can focus more attention on management duties. Their duties have increased drastically but their teaching hours have not been reduced. Their hours are almost that of level one educators. There may be a need for policy makers to consider revising the mathematics curriculum for the FP. The combinations of concepts in the same lesson may be too confusing for learners. There needs to be a system in place to identify and support schools that are underperforming in mathematics. Educators who need more developmental support need to be identified and developed.

5.4.2 Practice

Educators should be allowed to rearrange the concepts to be taught at their own discretion, to facilitate an easier understanding of the concepts and prevent confusion among learners. Educators should be allowed to pace the content according to the level of understanding of learners. They should have the authority to slow down when learners do not understand and increase the pace when they do. HoDs' teaching hours should be reduced so that they have more time to monitor curriculum coverage and engage in curriculum conversations.

5.4.2.1 Training

All educators teaching mathematics should be provided with ongoing in-service training by the DBE. Principals should make the necessary arrangements at school to ensure that all educators are able to attend these training sessions. Training should ideally be provided after school hours. Schools should also devise a development programme for educators after conducting a needs' analysis. Training at school may be conducted by the SMT and/or senior teachers with the necessary expertise. SMTs also need annual development workshops to execute their duties effectively. Facilitators at training sessions need to be adequately prepared to be able to provide answers to questions that may arise as educators may lose confidence in a process for which all contingencies have not been anticipated and catered.

5.4.2.2 Resources

Workbooks for Foundation Phase learners, need to be age appropriate in terms of font size and line spacing. Books should be printed in the language of teaching and learning and not be bilingual, as this is confusing for young learners. The correct quantity of the Jika iMfundo Programme and the DBE learner workbooks should be supplied to schools. The latest learner rolls may be accessed from the SASAMS database. The contextual factors at schools must be considered when resources are provided. Some schools need more help than others. The quintile ranking of public schools is not a true reflection of the actual context of schools. The ranking is based on the poverty levels, the average level of income, the rate of unemployment and level of education of the community in which the school is located. The specific weighting of those criteria is determined by the Department of Education (Murray, 2016: 2). "Schools falling in the bottom 20% of this ranking (i.e. the poorest schools) are classified as being Quintile 1 schools. Schools falling within the top 20% of this ranking are said to be Quintile 5 schools" (Ibid.).

Some schools are considered quintile 5 because of their infrastructure (they have tarred roads, running water and proper ablution facilities) but they cater for the lowest income groups, who are transported in from rural areas. The rural schools are ranked as quintile 1 and 2. It is understandable that they would receive more funding because they are in poorer communities and they need money for improvements and resources. However, in recent years, many learners from rural communities have chosen to attend suburban schools in order to receive instruction in English and access better facilities. Therefore, the status of the majority of the school population should be one of the criteria for ranking schools. If changes are to be sustained by schools, there needs to be consistency in the provision of resources. The sustainability of the change needs to be investigated and budgeted for before a change is implemented. It is also advisable that the KZN DoE decides on either the Jika iMfundo Programme workbook or the DBE workbook in the Foundation Phase as the use of both resources leads to confusion and an increase in the workload for learners and educators.

5.4.2.3 Support

There is a need for HoDs to either increase the number of one-on-one meetings with educators or start doing so if they are not. An important feature of the Jika iMfundo Programme is the need for all stakeholders to discuss curriculum coverage and find ways to assist educators to cover the curriculum adequately. These professional conversations with educators are a crucial role of HoDs which according to Senge (in Mthiyane, Naidoo & Bertram, 2018), expose people's thinking to

the influence of others and allow for scrutiny of teaching, learning and pedagogy. Merely discussing curriculum matters at the staff, phase and subject meetings is not adequate. HoDs need to give attention to the individual problems experienced by educators.

Visits to schools from circuit managers need to be consistent and developmental in nature, instead of being compliance oriented. Subject advisors need to be more visible at schools in order to support HoDs in monitoring their subjects. To achieve this, more personnel need to be employed in the district as there are too few subject advisors to supervise all the schools in the entire district (cf. 5.2.6.2). The moderation and supervision at schools needs to be consistent. District officials must play a more active role in monitoring new programmes and providing the necessary support. Parental involvement in schools can be improved through the SGBs who are the link between parents and schools. Their role in the governance of the school has been mandated in the South African Schools Act (SASA), 84 of 1996, (Section 16 (1)). School communities as equal partners with schools have important roles to play in the education of their children (Khuzwayo, 2007: 14). SGBs can also assist with improving learner discipline at schools by being more visible and by engaging with parents on these issues.

5.4.2.4 Curriculum Management

Principals need to devise an action plan to manage the implementation of the JiP. The role of the one-on-one curriculum conversations must not be overlooked. Supervision at schools should be done with the intention to improve educators' curriculum coverage and not solely to monitor compliance. Principals should consider having senior teachers assist the HoD in supervising the curriculum coverage. "All other duties are specified and allocated by the Principal after consultation with the educator staff" (DBE, 2016b). To ensure that they accept this added duty, their teaching load may be reduced. This is within the jurisdiction of the principal according to the Personnel Administrative Measures (PAM) document which states that principals must ensure that the teaching loads are equitably distributed among staff members (Ibid.). Principals, together with the SGBs, need to prioritize curriculum resources when doing financial planning so that educators can be more effective in the classroom. More training opportunities need to be provided to educators so that they improve their knowledge and skills.

5.4.3 Theory

It is necessary for theories on change to take into account that change is a complicated and emotional process, for which all contingencies should be catered. Specific actions required for change to be successfully implemented must be properly described and stipulated. More focus and

importance needs to be accorded to the role of motivation at each stage of the change process so that the adopters of change are amendable to the change. In this, the role of communication is important. It is through regular communication between implementers and change leaders that motivation and internal accountability can be fostered. The theory underlying the implementation of the JiP is that if curriculum coverage improves, then learning outcomes will improve. Although the schools in the study have seen an improvement in mathematics results over the past few years, they have not conducted empirical tests in support of this theory. It is recommended that the theory accommodate contextual factors at schools.

5.4.4 Recommendations for further research

Since this was a small-scale study conducted within suburban English medium primary schools in only one district of KZN, it is recommended that further studies be conducted on a larger scale using different research designs and paradigms with a larger sample, to compare and add to the present findings on the JiP.

Findings also revealed that participants considered the JiP to be beneficial in curriculum coverage, but however, there is an opportunity for a large-scale study into the effectiveness of the JiP by comparing learner performance pre and post the implementations of the programme. Since FP educators disapproved of the teaching of more than one mathematically concept in the same lesson studies may be conducted on the CAPS FP mathematics, especially into the arrangement and grouping of concepts to be taught together.

5.5 PROPOSED FRAMEWORK FOR THE EFFECTIVE IMPLEMENTATION OF THE JIKA IMFUNDO PROGRAMME

From the results and recommendations, the researcher devised a framework that will be useful in facilitating efficacy of the adoption and implementation of the Jika iMfundo Programme which may lead to its institutionalisation at schools. The framework presented in Figure 5.1 is based on the Theory of Action promulgated by Fullan (2016). Fullan criticised other models of change stating that they neglected to take into account the entire system and focused on improving individuals or outcomes (Fullan 2016: 8). As Figure 5.1 demonstrates, the JiP can be implemented in three steps.

Step 1: The adoption of the innovation

This framework recommends that if the DBE identifies an area in education requiring intervention, for example the performance in mathematics in primary schools, they need to engage with educators through the teacher unions. Unions could obtain the inputs on the recommendations made by the DBE for change from their members. A combination of the top-down and bottom-up method may be adopted. The suggestions made by educators may be forwarded to the DBE and these should be given careful consideration in the planning process. This level of consultation and provision of information will garner the support and ownership of educators for the change. This may lead to educators who are motivated for change since they collaborated on its development. Success at each phase will lead to enhanced levels of motivation.

Step 2: Successful implementation

Once the change has been adopted, schools need to be prepared for the implementation through capacity building opportunities. These should be held after school hours and CPTD (continuing professional teacher development) points may be allocated to encourage educators to attend. Training must be presented by experts in the field. Resources and manuals must be provided and participants must be actively involved in interesting activities. Training must be held before and during implementation. Follow-up workshops should be held to evaluate the implementation process. Training needs to continue at school level because this is where educators are based daily so the SMT must receive intensive training first.

The formation of professional learning communities (PLC) - any group of individuals that get together to discuss educational issues, having a common interest within the school that are interested in the process of change will then meet regularly to discuss issues around the implementation of the programme or on curriculum matters. Formation of school clusters also represents a PLC. Schools can support each other. They can share knowledge, expertise, skills and resources.

Throughout this process, educators need to be supported by the SMT and the district. The implementation must be monitored and reflected upon at school and district level. Regular meetings must be held at schools to discuss problems and share successes. SMT must attach more importance to one-on-one curriculum contact sessions. The focus must be on developing educators to cover the curriculum effectively, not on fault finding and compliance. Regular motivation and support will lead to educators who are motivated and ready to comply willingly.

Training of educators should be ongoing, as this will lead to greater confidence in the subject content. Resources for effective teaching and learning must also be made available. Schools and the DBE must attend to the challenges encountered at schools, for example the reduction in class size and workload of educators and SMT. Continued monitoring and support will lead to the actions of educators and SMT becoming a routine which is step 3 in Fig 5.1.

Step 3: Institutionalisation

This step further implies that educators are motivated and possess internal accountability, have knowledge of the content, are willing to continuously improve, track their curriculum coverage and perform effectively in the classroom. This will be evident in the high-quality performance of learners. Managers are supportive and manage the curriculum successfully. Routines are established around curriculum supervision and management. Each group from the educator and SMT at school level to district officials, know exactly what their roles are, and are accountable for them.

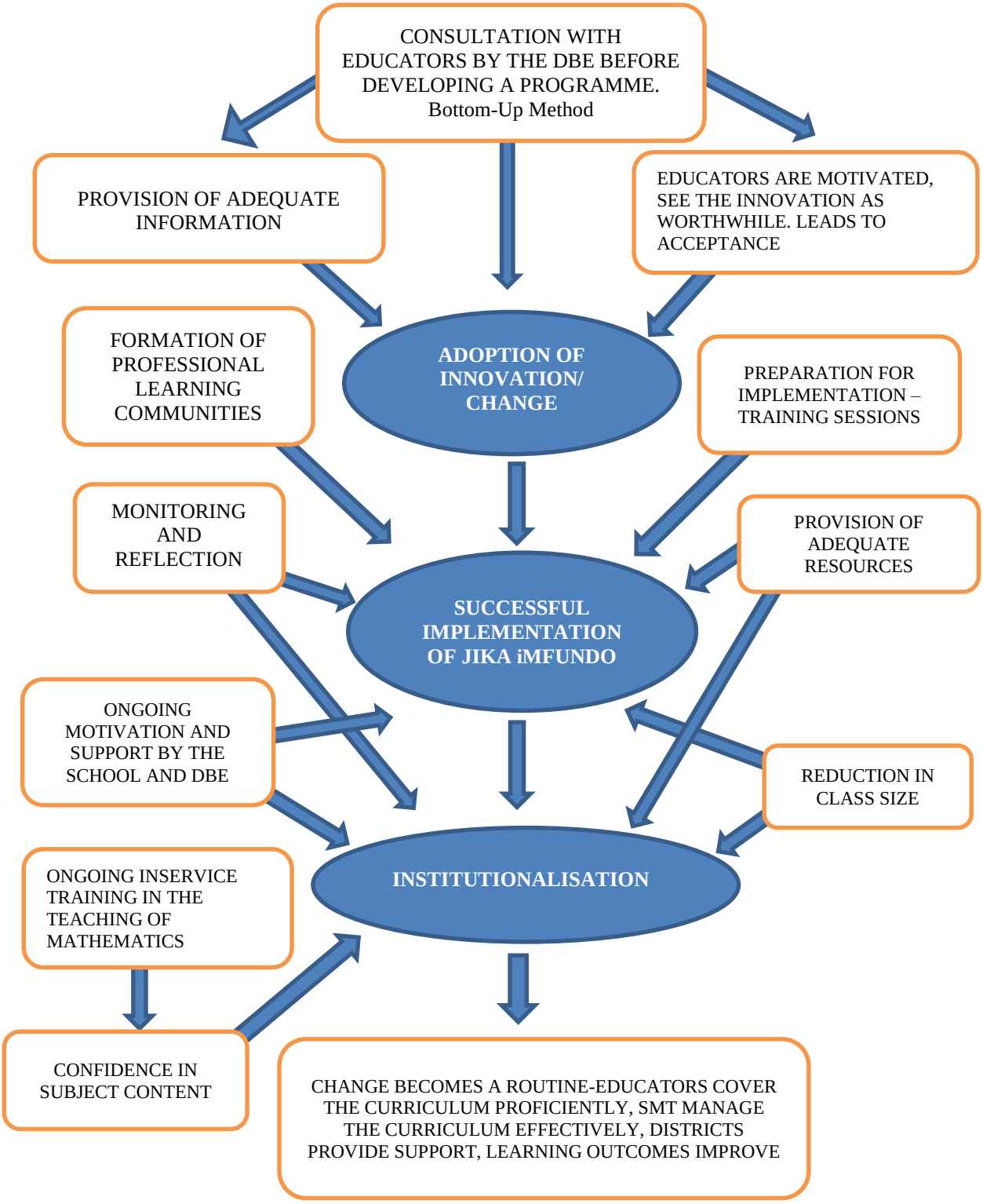

Figure 5.1: Framework for the Effective Implementation of the Jika iMfundo Programme

5.6 LIMITATIONS OF THE STUDY

The following limitations have been identified in this study:

The research employed only the qualitative method. The quantitative method is also needed to provide further statistical evidence. The study was conducted using the case study design. The choice of the qualitative case study design, limited the generalisability of the findings. Results may be generalised within the schools in the study but it cannot be assumed that all schools in the district implementing the JiP have the same experiences. This study was conducted in one district (King Cetshwayo District) out of two districts of KZN province in which the JiP was piloted. The sample is therefore not a true representation of the entire population that has implemented the programme. Further studies may be conducted to determine how the JiP is implemented in both districts. Another limitation is that the study was conducted within suburban primary schools so results may not be applicable to rural primary schools and high schools. Further research is needed at the secondary school level. The research only focused on teachers, HoDs and Principals and did not include other important stakeholders such as subject advisors and circuit managers. Time and limited resources were also limiting factors. Had this study been funded and conducted over a longer period, the sample could have included more schools and participants including subject advisors. The views of subject advisors could have added a different perspective on the support provided to schools. Furthermore, a larger sample of educators from within these three schools would have strengthened the findings. Since purposeful sampling was used in this study, the views put forward are those of selected participants and are not indicative of the perspectives of all educators and managers at the sampled schools. The focus of the study was on mathematics so the results cannot be compared to implementation in other subjects. Internal generalisation can be made within each school for mathematics. There were limitations in data collection, especially in the interviews. It cannot be assumed that what people say at interviews is what they actually think and feel. There is no way to verify that what they are saying is actually how they feel. To reduce this form of data bias, the researcher used triangulation of data collection methods. Data from observations and document analysis was triangulated with data from interviews. The choice of in-depth one-on-one interviews which is a time consuming activity, also influenced the researcher's choice of a smaller sample. The researcher could have used focus group interviews to accommodate a larger sample. There is the possibility of further research into the topic using a focus group instead of in-depth interviews. The researcher assumed a dual role of manager and researcher, researcher bias also was a limiting factor. To reduce researcher bias member checking and thick descriptions are provided of the research methodology. In spite of these limitations, the

researcher's goal was to ensure the trustworthiness of the findings by employing the following measures: triangulation, member checks and comparison.

5.7 CONTRIBUTIONS OF THE STUDY

Despite the limitations that have been identified in this case study, the results may draw the attention of curriculum innovators to some of the problems experienced by educators and managers. These findings may be compared to other studies on the JiP to identify similarities and variations and may assist in the planning of future change efforts. Developers of the JiP could use the data from this study to reinforce or consolidate their studies on the implementation of the programme. Schools that have implemented the JiP might be able to identify with some of the challenges faced by the schools in the study. Those schools that have just introduced the JiP could learn from the experiences of participants in this study. The study drew the attention of the participating schools to the implementation of the JiP. These schools may be able to focus and reflect on their experiences with the JiP and, by doing so, they would be able to attend to some of the areas in which they are lacking, such as self-reflection. The SMT, through reflection, could identify some of the challenges experienced by educators and might want to provide a supportive and conducive context for them in which to thrive. Through the qualitative research paradigm, the study contributes to the knowledge on how change affects the participants, educational and curriculum change theories in general and enhanced understanding of the JiP in particular.

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APPENDICES

APPENDIX A: ETHICAL CLEARANCE

UNISA

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2018/03/14

Ref: 2018/03/14/06032397/26/MC
Name: Mrs G Moodley
Student: 06032397

Dear Mrs Moodley

Decision: Ethics Approval from 2018/03/14 to 2023/03/14

Researcher(s): Name: Mrs G Moodley
E-mail address: 6032397@mylife.unisa.ac.za
Telephone: +27 83 672 1234

Supervisor(s): Name: Prof PL Mabunda
E-mail address: Maburpl@unisa.ac.za
Telephone: +27 12 429 4478

Title of research:

Improving learning outcomes through curriculum coverage: The perspectives of Educators on the implementation of the Jika Imfundo Programme.

Qualification: D Ed in Curriculum and Instructional Studies

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2018/03/14 to 2023/03/14.

*The **low risk** application was reviewed by the Ethics Review Committee on **2018/03/14** in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

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Preller Street, Muckleneuk Ridge, City of Tshwane
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2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after the expiry date **2023/03/14**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2018/03/14/06032397/26/MC** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

Dr M Claassens
CHAIRPERSON: CEDU RERC
mcdtc@netactive.co.za

Prof V McKay
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APPENDIX B: PERMISSION TO CONDUCT RESEARCH

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Phindile Duma | Tel: 033 392 1063 | Ref.:2/4/8/1599

Mrs G Moodley
PO Box 1442
Richards Bay
3900

Dear Mrs Moodley

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"IMPROVING LEARNING OUTCOMES THROUGH CURRICULUM COVERAGE: THE PERSPECTIVES OF EDUCATORS AND MANAGERS ON THE IMPLEMENTATION OF THE JIKA IMFUNDO PROGRAMME"**, in the KwaZulu-Natal Department of Education institutions has been approved.
The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 13 August 2018 to 02 March 2021.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Phindile Duma at the contact numbers below,
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

(PLEASE SEE LIST OF SCHOOLS ATTACHED)

Dr. EV Ncama
Head of Department: Education
Date: 14 August 2018

APPENDIX C: PARTICIPANT INFORMATION SHEET

PARTICIPANT INFORMATION SHEET

Title: IMPROVING CURRICULUM IMPLEMENTATION AND COVERAGE: MANAGERS AND EDUCATORS' EXPERIENCES OF THE JIKA IMFUNDO PROGRAMME IN SELECTED SCHOOLS IN THE KING CETSHWAYO DISTRICT

DEAR PROSPECTIVE PARTICIPANT

My name is Mrs Grace Moodley. I am doing research under the supervision of P.L. Mabunda a professor in the Department of Education towards a Doctorate in Education (D. Ed.) at the University of South Africa. I am inviting you to participate in a study entitled: Improving Curriculum Implementation and Coverage: Managers and Educators' Experiences of the Jika iMfundo Programme in Selected Schools in the King Cetshwayo District

WHAT IS THE PURPOSE OF THE STUDY?

This study will collect data on the experiences of educators and managers on the implementation of the Jika iMfundo Programme at a school in theKing Cetshwayo District. The effectiveness of the programme in curriculum coverage will also be evaluated.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited because you have been implementing the Jika iMfundo Programme in Mathematics at your school and you have attended JiT /mathematics workshops or you are supervising the coverage of mathematics in your phase or you are managing the implementation of Jika iMfundo at your school. I obtained the permission of the KZN Department of Education to conduct the study at your school and your principal has been made aware of this. I have obtained your details from the principal since you are the person that teaches mathematics in your class/grade or you are a manager at the school. There will be nine educators, three HoDs and three principals/DP's who will form the sample.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

Describe the participant's actual role in the study.

The study involves semi- structured one-on-one interviews, analysis of documents (curriculum planner, tracker, annual teaching plan, HoD curriculum planner, minutes of HoD meetings and learner workbooks.) The interviews should take approximately half an hour. A follow-up interview maybe necessary to gain clarity on certain points. Such an interview would be approximately 15 minutes.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The study will benefit educators and managers in assessing the effectiveness of the implementation of Jika iMfundo Programme at your school. Since this is a pilot project in the King Cetshwayo District, the findings can assist initiators in assessing whether the programme is can be implemented in other districts. Lessons learned from this case study can inform future studies. Good practices may be adopted by other schools in the implementation of such programmes.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

There will be low risk to you of any harm or discomfort if you participate in this study. The only inconvenience you will experience is the sacrifice of your time. The information you will be providing is not of a sensitive or personal nature. You will however be required to be a part of a focus group with between 3 and 9 participants. Although your confidentiality and anonymity will be protected by the researcher there might be risk of the members of the focus group divulging personal information. I will at the outset of the focus group meeting request members of the group to respect the privacy and protect the identity of other members by not discussing the session with non- participants. Although it is highly unlikely that you will be harmed or injured as a result of this study every measure will be taken to ensure you receive immediate medical attention and/ or counselling should you be harmed in any way.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this. Your confidentiality will and anonymity will be respected and maintained. Your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

The data that you provide will be used in the research report which may be published but your identity will not be revealed in such a report or publication.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard in my office at my place of employment for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Should it become necessary to get rid of any information, hardcovers will be shredded and electronic copies will be permanently deleted from the hard drive of the computer using relevant computer software.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participants will not incur any costs for participating in this study or receive any monetary incentives.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of the UNISA College of Education. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings or should you require any further information about any aspect of this study or have any concerns about how the research was conducted, please contact the researcher on …….. or email ……..….

The findings are accessible for a period of 6 months after the completion of the study.

Thank you for taking the time to read this information sheet and for participating in this study.

Thank you

_____

Mrs G. Moodley

CONSENT TO PARTICIPATE IN THIS STUDY (Return slip)

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname (Please print) _____

_____ _____

Participant Signature Date

Researcher's Name & Surname (Please print) _____

_____ _____

Researcher's signature Date

APPENDIX D: INTERVIEW SCHEDULE FOR EDUCATORS

VIEWS ON CHANGE

1. What are your views on changes in education?
2. What are your feelings about the Jika iMfundo Programme that has been introduced at your school?
3. How was information about the programme communicated to you? What are your feelings on this? 4. What are the implications of the programme for teaching and learning?

TRAINING

1. What are your experiences with the training that has been provided to improve curriculum coverage?
   (Probing questions)
2. How often? (Frequency of the training)
3. What was the training on?
4. Who provided the training?
5. What was your role at these workshops?
6. Was the training adequate in terms of time and quality for the implementation of the programme? Why? How can it be improved?

RESOURCES

1. What are your experiences with the resources that have been provided to improve curriculum coverage?
2. How are you using the resources provided to improve curriculum coverage?
3. Are these adequate for the implementation of Jika iMfundo?

IMPLEMENTATION OF JiP

1. How did your school go about implementing the programme?
2. What were some of the challenges that you are facing with the implementation of Jika iMfundo?
3. Describe your role in implementing the Jika iMfundo Programme in your practice.

SUPPORT

1. Describe the support have you received from the SMT in implementing the programme. Has this support been adequate? How can it be improved?
2. What supportive role has the district provided to you as the educator in the implementation of Jika iMfundo?
3. Describe the support received from the mathematics subject advisors at school or at cluster meetings.

CONTINUITY OF THE PROGRAMME

1. Do you think you will be able to sustain these changes in your teaching practice? How?

2. What are your views on the importance of curriculum coverage for learner achievement?

APPENDIX E: INTERVIEW SCHEDULE FOR HODS

VIEWS ON CHANGE

1. What are your views on curriculum change and innovations in general?
2. What are your views on the Jika iMfundo Programme that has been introduced at your school?
3. How did to find out about the programme?
4. Why was the programme introduced?

TRAINING

1. Did you receive any training on implementing the programme?
2. How often? (Frequency of the training)
3. What was the content of the training?
4. Who facilitated this training?
5. What was your role at these training workshops?
6. Was the training adequate for the implementation of the programme? Why?
7. How can this be improved?

RESOURCES

1. What resources have you received for curriculum supervision?
2. Explain how these resources are being used to monitor curriculum coverage.
3. How effective are these resources? Explain.

IMPLEMENTATION OF JIKA IMFUNDO

1. How did your school go about implementing the programme?
2. What were the teachers' responses to this innovation?
3. Describe some of the innovations in terms of curriculum supervision introduced by the programme.
4. In what way have these changes been beneficial to teaching and learning?
5. Do you think you will be able to sustain these changes? Explain how you will achieve this.
7. What are views on the importance of tracking curriculum coverage to improve learner achievement?

ROLE OF THE HoD

1. What is your role as a HoD in the implementation of the Jika Imfundo programme?
2. How do you go about monitoring curriculum coverage?
3. What aspects of the educator's work do you monitor? (Probe for classroom observation, checking of educator files and learner books.)
4. Do you conduct one-on-one meetings with your educators? How effective is this activity?
5. How do you involve the principal in this process?

SUPPORT

1. What were some of the challenges you faced with the implementation of the programme?
2. What kind of support have you received in implementing the programme and from whom?
3. How did you support the educators in your department in the implementation process?

APPENDIX F: INTERVIEW SCHEDULE FOR PRINCIPALS

VIEWS ON CHANGE

1. What are your views on the educational changes in general?
2. What are your views on the Jika iMfundo Programme as an intervention to bring about improvement in learning outcomes?
3. What role did you play in the decision to introduce the programme in KZN schools?
4. What was the reaction of your staff to the programme?

PREPARATION FOR CHANGE

1. Have you and your educators received any training to implement Jika iMfundo?
2. How often were these training activities held and how many have you attended?
3. Please describe the training you received. (What was the training on? Was it adequate in terms of content and time?
4. Have all your Mathematics educators been trained? If not, what training opportunities have you provided at school?

RESOURCES

1. What resources do your educators and learners need to implement Jika iMfundo?
2. Do all of them have access to these resources. If not, how are you dealing with this challenge?
3. How are these resources being utilised?
4. How is the use of the resources being managed and by whom?

VIEWS ON IMPLEMENTATION

1. How did you motivate them to implement the programme?
2. What changes in practice if any have been made at your school with regards to the programme?
3. What challenges have you and your staff experienced in the implementation process?
4. How have you addressed these challenges?

CONTINUITY OF THE PROGRAMME

1. How has your school assessed the impact of Jika iMfundo? How have you achieved this?
2. Will you be able to sustain the programme at your school?
3. What needs to be done to achieve this?

ROLES OF EDUCATORS AND HoDS

1. Explain how your educators are implementing the programme in their teaching to increase curriculum coverage.
2. How are your HoDs using the programme to supervise curriculum coverage?

ROLE OF THE PRINCIPAL

1. Did you attend the launch of the Jika iMfundo Programme? What are the reasons for the implementation of this programme?
2. How did you communicate these envisaged changes to your management and educators?
3. How have you gone about implementing the programme at your school? (Steps)
4. How did you motivate them to implement the programme?
5. How do you go about managing the curriculum at your school?
6. Is the curriculum being covered adequately at your school?
7. What are some of the challenges to curriculum coverage at your school?
8. How do you as the principal monitor and ensure curriculum coverage?

SUPPORT

1. What kind of support did you receive in implementing the programme and from whom?
2. Describe the type of monitoring that was done by District officials during the implementation of the programme?
3. Describe the support that you provided to the educators during the implementation process.

APPENDIX G: OBSERVATION SCHEDULE

SECTION A

LESSON PLANNING AND PREPARATION	YES	NO
1. Is there sufficient evidence of lesson planning and preparation?		
2. Does the date of the lesson correlate with the dates in the curriculum planner?		
3. Does the lesson include a clear title and lesson content that is relevant to that of the ATP?		
4. Does the assessment content of the lesson conform to the prescribed content of the planner?		
5. Does the lesson link sequentially to previous lessons?		
6. Does the lesson preparation include informal tasks that learners will be engaged in?		
7. Are mental and oral assessments included in the lesson preparation?		
8. Do the tasks in the lesson preparation address appropriate cognitive levels required in the subject?		
9. Does the lesson plan make provision for remediation, enrichment and reflection?		
10. At the end of the lesson, does the teacher provide for synthesis of what has been learned and where appropriate, previews/connects to next lesson(s)?		

SECTION B

ACTIVITIES (EDUCATOR & LEARNER)	YES	NO
1. Are the activities able to explicitly link past learning and new concepts to students' backgrounds and experiences		
2. Are the activities designed to build upon one another in degree of difficulty and include critical thinking skills?		
3. Do the learners readily understand the connection between an activity and the previous one?		
4. Are the teaching and learning activities designed to enable learners to achieve the outcomes?		
5. Do the activities describe clearly what the learners will do and the procedures for teacher to set up activities?		
6. Is there evidence of sequencing, logical flow and easy transitions between different activities?		
7. Does the educator teach Mathematics at least one hour every day including 10 minutes of stimulating mental Mathematics exercises at the appropriate grades and it is reflected in the activities?		
8. Does the educator observe on daily basis learners' counting skills, ability to answer questions, ability to reflect on their own solutions to problems in Mathematics as stipulated by the Assessment Framework?		

SECTION C

TEACHING & LEARNING STRATEGIES	YES	NO
1. Does the educator provide sufficient opportunities for a variety of teaching and learning strategies?		
2. Does the educator use a variety of question types including those that promote higher-order thinking skills throughout the lesson?		
3. Does the educator use scaffolding techniques consistently (providing the right amount of support to move learners from one level of understanding to a higher level) throughout lesson?		
4. Does the educator use a variety of strategies to provide learners with opportunities to become actively engaged in the learning process?		
5. Does the educator use methods, techniques and learning experiences appropriate to the outcomes?		

SECTION D

LEARNER TEACHER SUPPORT MATERIAL (LTSM)	YES	NO
1. Does the educator use teaching and learning support material that appeal to different learning styles: auditory, visual, or kinaesthetic?		
2. Does the educator use a variety of teaching and learning support material to illustrate key concepts to enhance teaching and learning?		
3. Does the educator have all the basic, minimum resources to effectively facilitate teaching and learning of mathematics and languages in the classroom?		
4. Is the educator making adequate use of the CAPS policy document, Jika iMfundo Curriculum Planner and Tracker and Mathematics CAPS Assessment Planners to plan and prepare effectively?		
5. Are there a variety of teaching and learning support material provided by the Department of Basic Education to enhance teaching and learning mathematics accessible to educators?		

SECTION E

ASSESSMENT	YES	NO
1. Are the assessment tasks aligned with the stated outcomes and the type of performance appropriate to desired learner outcomes for the specific grade?		
2. Do the assessment tasks incorporate formative assessment during the lesson? (check for understanding)		
3. Does the educator provide opportunities for regular practice and feedback on their output?		
4. Does the educator use a variety of methods, tools and techniques during the assessment tasks?		
5. Does the educator record all the formal assessment tasks effectively and efficiently?		

ADDITIONAL COMMENTS/ OBSERVATIONS

APPENDIX H: EDITOR'S CERTIFICATE

Helen Bond
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10 November 2019

CERTIFICATE

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Dear Grace

Thank you for using Impela Editing Services to proofread your PhD thesis.

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Kind regards

HBond

Helen Bond (Bachelor of Arts, HDE)

APPENDIX I: PLAGIARISM REPORT

Turnitin Originality Report

1.5.2 Sub -Questions This study was guided by the following specific research questions: 1. 116

How are educators and managers prepared for the implementation of Jika iMfundo? 2. What are the views of educators on the implementation of Jika iMfundo? 3. What are

the views of educators on the effectiveness of the resources 280

with which they are provided?

4. What are the roles and responsibilities of educators and managers in implementing the JP? 5. What support is 102

made available

for the effective implementation of the programme and at 285

what levels?

1.5 Aims and Objectives of the Study This study' 215

s main focus is on the lived experiences of managers and educators with the implementation of the Jika iMfundo Programme at

primary schools in the King Cetshwayo District of KwaZulu-Natal (KZN). 17
Jika iMfundo, a programme of

the KwaZulu-Natal Department of Education, was introduced in to improve the poor performance of South African learners in internationally benchmarked exams (Murray, 2016). 1.6.1 Research Aims ? To investigate managers' and educators' experiences of the implementation of the Jika iMfundo programme. 1.6.2 Research Objectives ? To determine the views of educators and managers of the training that they received in preparation for the implementation of the Jika iMfundo Programme. ? ? To establish how educators and managers are using the support material provided. To establish the roles of educators and managers in ensuring effective curriculum coverage. ? To determine

the role of school principals in managing the curriculum and in managing 87
change. ? To reveal the

challenges experienced by schools in the implementation of the 30

Jika iMfundo Programme. ? To assess the

effectiveness of the support provided to educators and 148

schools in implementing any changes. ? To elicit the views of educators and managers on the Jika iMfundo as a programme to improve learning outcomes through curriculum coverage. 1.7 Research Design and Methodology A research design, according to Gray et al. (2007: 34), is 'the overall process of using your imagination as well as the strategy and tactics of science to guide the collection and analysis of data'. Once